art Bibl MAY 1943

DESIGN

LIBRARY OF WASHINGTON UNIVERSITY ST. LOUIS - MO.
JUL 22 194
R LIBRARY USE ON

How Young America Paints

Now it can be shown!

"How Young America Paints" is the title of a fascinating new motion picture **in full color** based on the Young America Paints Exhibition held in New York. Besides reproducing many interesting examples of work, this film shows by actual demonstration the best techniques for using popular mediums such as Shaw Finger Paint, Artista Tempera Paint, Crayola Stenciling, Tempola Craft, Frescol and Chalk Crayon. Teachers and students alike will find "How Young America Paints" highly inspirational.

There is no charge to schools or organizations for the use of this film. Application blanks may be procured by writing to Binney & Smith Co., School Department, 41 East 42nd Street, New York, N. Y.

with Frescol

Students are fascinated by this versatile dry paint that can give the effect of water color, pastels or charcoal. For bold strokes, the brush is used flat. For sketching, the brush is held lightly, and outlines are drawn for later filling in and blending with another color. So flexible is this medium that merely by twisting and turning the brush a variety of extraordinary effects are produced.

FRESCOL
is available in sets containing 5, 8 and 12 colors.

Artista Tempera Poster Paint **is made in 24 beautiful colors including black and white, in student size and 2, 8, 16, 32-ounce and gallon jars. Also available are gold and silver.**

with Artista Tempera

Delightful effects with Artista Tempera Poster Paint are achieved by students when they learn proper brush techniques—using freearm strokes with a loaded brush, a medium pressure for narrow lines, dabs with the side of the brush or with the hand. In "How Young America Paints," the technique of using square tipped and flat tipped brushes is also illustrated.

BINNEY & SMITH CO.

41 East 42nd St., New York, N. Y.

BINNEY & SMITH GOLD MEDAL PRODUCTS

FELIX PAYANT
EDITOR

•

Contributing Editors

Helen Durney
Clifton Gayne, Jr.
Robert Iglehart
Vernon Clark

•

Advisory Editors

Dr. Ray Faulkner, Head of Art Dept., Teachers College, Columbia Univ.

Alfred Howell, Director of Art, Public Schools, Cleveland, Ohio

Alfred E. Pelikan, Director of Milwaukee Art Institute, Milwaukee

R. Guy Cowan, Design Consultant, Onondaga Pottery, Syracuse, N. Y.

Elizabeth Gilmartin, Director of Art, Public Schools, Toledo, Ohio.

Marion E. Miller, Director of Art, Public Schools, Denver, Colo.

Clara P. Reynolds, Dir. of Art, Public Schools, Seattle, Washington

Edna Patzig, Assoc. Professor, Department of Art Ed., University of Ia.

Dr. Jane Betsey Welling, Prof. College of Ed., Wayne Univ., Detroit.

Wanda L. Wheeler, Supervisor of Art Education, City Schools, Knoxville, Tennessee

Clara MacGowan, Assoc. Prof. of Art, Northwestern Univ., Evanston, Ill.

• Each month we aim to bring our readers the most timely material so that art education and appreciation will survive the emergency. In our next issue will appear: A PLAN FOR ART STUDY TODAY by Marjorie B. Miller; MEXICO THROUGH HER ARTS AND CRAFTS by Margaret Chynoweth Cash; THE PAINT TABLE by Jessie Todd; EGYPTIAN CARD WEAVING by Hazel Craig; REED PENS, MATERIALS STUDENTS CAN MAKE by James W. Grimes; SIGNIFICANCE OF THE POSTER TODAY by Alfred Howell and others too valuable to miss.

DESIGN

VOL. 44 MAY 1943 NO. 9

TABLE OF CONTENTS

COVER—STUDYING A FORM IN PLASTER
A student of Pratt Institute

ART EDUCATION A WARTIME RESOURCE ..... Page 3
By Jane Betsey Welling

WINSLOW HOMER • WAR CORRESPONDENT ..... Page 4
By Marion Miller

CAMOUFLAGE ..... Page 5
By Lenore Martin Grubert

WHAT IS PROTECTIVE CONCEALMENT • CAMOUFLAGE? ..... Page 6
By Milton S. Fox

PREPARING FOR INDUSTRIAL DESIGN ..... Page 8
By Donald R. Dohner

DESIGN IN ACTION ..... Page 10
By Charles Bayly, Jr.

CAMOUFLAGE IN THE SECONDARY SCHOOLS ..... Page 12
By Alfred Howell

ART MATERIALS STUDENTS CAN MAKE ..... Page 14
By James W. Grimes

KANSAS CRAFTS AND CRAFTSMEN ..... Page 16
By Thelma Pence

INDEX OF AMERICAN DESIGN ..... Page 17

THE DIORAMA AS AN ART PROJECT ..... Page 18
By Natalie Wilkinson and Hillis L. Howie

ARTISTS IN THE ARMY SIGNAL CORPS ..... Page 19

DRAWING FROM PLANT LIFE ..... Page 20
By Hazel Willis

ANIMAL KINGDOM IN NEWSPAPER ..... Page 21
By John G. Kemper

FLOWERS FROM SCRAPS ..... Page 21
By John G. Kemper

ART FOR VICTORY ..... Page 22
By Dorothy Wilkinson

Published monthly except July and August by Design Publishing Company, 243 N. High St., Columbus, Ohio. Felix Payant, President; Steve Mavis, Vice President; J. Paul McNamara, Secretary and Treasurer. Yearly subscription: United States $3.00; Canada, $4.00; Foreign, $4.50; Single copy, 35c. Copyright, 1943, by Design Publishing Company. Entered second class matter September 16, 1933, at the Postoffice at Columbus, Ohio, under act of March 3, 1879.

If DESIGN is not received within one month after publishing date, notify us promptly, otherwise we cannot be held responsible. The Postoffice does not forward magazines, and when changing an address send in the old address as well as new and allow one month for the first copy to reach you. Manuscripts should be typewritten. Each piece of illustrative material should bear the name and address of sender and be accompanied by return postage. They will be handled with care, but we assume no responsibility for their safety.

PRATT INSTITUTE
THE ART SCHOOL

DEGREE COURSES—Architecture, Art Education

CERTIFICATE COURSES—Advertising Design, Architectural Construction, Illustration, Industrial Design, Interior Design

CATALOG ON REQUEST

JAMES C. BOUDREAU, Director Brooklyn, N. Y.

RINGLING SCHOOL of ART

(School of the John and Mabel Ringling Museum of Art)

Announces 11 weeks summer term for artists, art teachers, art students, and art hobbyists, at Little Switzerland, North Carolina—4000 feet elevation. Faculty of outstanding artists teaching Drawing and Painting, Illustration, Commercial Art, Fashion Arts. Superb living accommodations. Board, room, tuition $275. Special weekly rates. Winter School—Sarasota, Florida. Write for general catalog and folder "Summer Study in the Land of the Sky."

Address: V. D. KIMBROUGH, Pres.

SARASOTA FLORIDA

THE ST. LOUIS SCHOOL OF FINE ARTS
WASHINGTON UNIVERSITY ST. LOUIS, MO.

Professional training leading to the B. F. A. degree in Painting, Sculpture, Illustration, Advertising Art, Dress Design, Fashion Illustration, Crafts. Teacher Training course. Students may live on Campus and participate in all activities.

For information, address:

KENNETH D. HUDSON, Director, Room 60

THE KANSAS CITY ART INSTITUTE

Professional courses in the Fine and Applied Arts
War Production Training Courses
Special Post War Design Courses
Credits transferable — Catalogue

4423 WARWICK BOULEVARD KANSAS CITY, MISSOURI 2

AIRWAYS TO PEACE EXHIBITION

● Wendell L. Willkie is writing the text for **Airways to Peace: An Exhibition of Geography for the Future** which will open to the public Friday, July 2, at the Museum of Modern Art. The exhibition is a sequel to last year's **Road to Victory** exhibition, text for which was written by Carl Sandburg. The purpose of the new exhibition is to present in graphic form the basic factors of air-age geography, an understanding of which is essential to winning the war and making a successful peace.

Airways to Peace has been in preparation for many months. As plans for the exhibition developed, its elements and objectives were faound to cooincide to a great extent with the conclusions drawn by Mr. Willkie from his trip around the world and he was asked to write the text, which will be a running commentary along the walls of the exhibition.

WHY PRE-INDUCTION TRAINING?

● Today the Army is looking for soldiers with specialized training. Modern mechanized war demands that 91 out of every 100 men must be specialists. And that demand is immediate, for at no time in her history, has America been so pressed for time as she is right now. Pre-induction training in high schools can go a long way towards filling this demand. Too, it will relieve the strain on Army personnel and facilities and will shorten the period of military instruction.

It is estimated that out of every 100 male students who graduate from high school, about 60 will be taken into the Army. About half of these 60 will ultimately find their way into the Specialized Training Program at colleges and universities and later perhaps to Officer Candidate Schools. The remainder will become Army soldier-technicians. For the first group an intensive General Course is recommended, stressing English, Mathematics, Science and Modern Languages. For the second group, courses are suggested which will prepare the student for later technical military training.

More than half a million youths under 18 years of age are participating in the Pre-Induction Training Program. Our enemies had a head start in training personnel to carry out the specialized duties required by modern warfare. But America is fast closing the gap. Technically trained American youths are pouring into our Army in ever increasing numbers, thanks to the cooperation of high school principals, headmasters, superintendents and teachers.

MAKE YOUR OWN

● Dr. James W. Grimes, Professor of Painting at The Ohio State University, is an authority on the methods and materials of painting. Professor Grimes is the author of the series of articles entitled, "Art Materials Students Can Make."

"The thing that got me started," says Professor Grimes, "was the realization on my first trip to Europe that the great masters of Renaissance Painting had a real secret—something worth trying to find out about and to follow. One aspect of it, I discovered, lay in their intricate use of materials—a use based upon **first hand knowledge.**

Consider my own case. I had gone through college and art school painting out of tubes with never the slightest notion of the real nature of the material I was utilizing. You cannot make the best use of paint when you do not understand it. Our kids from elementary school on up ought to know from first hand experience that paint is nothing but color and paste, the constituency of any particular kind of paint being determined by its use.

And what exciting by-ways into science, history, botany. chemistry, and many other fields are opened out when a youngster starts unravelling some aspect of the problem of making art materials. For instance take brush making. You have to find out about various kinds of fur, you get into economics, geography, hog raising, and may spend a class period at the slaughter house!

But the most important thing is that when a student makes a pen, a crayon, a pan of water colors or whatever he may need for a particular job, he gains an invaluable and disciplinary understanding of his materials and tools, and an understanding that enters into the quality of his art performance and final product.

These articles are really a series of notes regarding things I have found out about, things hard to find out about, things that teachers will find useful."

ART EDUCATION A WARTIME RESOURCE

By JANE BETSEY WELLING
Professor of Ed., Wayne Univ.
Detroit, Michigan

IF our emphasis on art education has at date fulfilled the potentials of this great area of expression and

IF it has not limited itself too strictly to that self-expression which makes for isolation and an esoteric output in "Fine Art-ie" terms.

There can be little doubt of the need for its resources in a time of intense aggravation and focus on winning a staggering war.

The potential resources of the art offer (1) a means for reaching people effectively and simply through the use of usual propaganda and the statement of fact in pictorial forms. "A picture is worth ten thousand words." Whether the fact to be stressed is a fact concerning educational needs, or a statement of production output or a presentation of the need for reorganizing the secondary schools programs in the war effort or a boost for the war chest. The use of "graphics" as a tool for putting over ideas fast and forcefully is necessary. Art education is the only area which can teach people to use manual aids to reinforce ideas and to make them appeal directly and with visual force. The art teachers of the U. S. A. who have at hand, in functioning order, this tool of expression are the obvious teachers of it on any educational bench where the need is felt. Nothing could be more wrong than for a democratic peoples, whose understanding must needs be based on fact, to ignore this ready resource which can meet the demands. Art teachers must realize their possible contribution in this area of visualization and of pictorial statistics and must reorganize their art programs to give it full scope.

(2) The potential resources of the arts offer: a means of service to individuals and groups which is sorely needed in the forthcoming terms:

(a) **For recreation and relief** from strain the mind works best which is balanced. Except momentarily under great stress it cannot function merely in negative terms. It must have constructive as well as destructive outlets. It must have hope and imagination and the surety of knowing how and why if it is to stay sane enough to function. Therapy must be used as a preventative. It cannot afford to be postponed until the horse is stolen and the havoc done. Children, especially need the arts of expression and they need them geared to the war effort in constructive ways. With all these they can help to win through this time of stress and strain. Teachers and art teachers can help to prevent delinquency among the age group which is temporarily just below the draft if they can revise their work and make it "real" to young people whose world is full of activity in which they, yet have no active part.

Soldiers even must have recreation and change if they are to do their jobs. Civilian life as usual is out for the duration but we are in a sorry fix if we as educators do not realize that basic needs cannot be ignored because of strife and that strife obliterate or suspend the need for their success. The arts are a human need.. They have survived wars, pestilence and depressions before: They are activities which must go on in spite of and because of strain.

(b) **For groups solidarity.** Everyone needs to learn to work with others to play his role with others in the great drama of living whether in war or peace time. The stage is ours. To act effectively and well on it, we must have practice. The art and art teachers as experienced practitioners in these areas of groups expression have a dramatic and needed means at hand for teaching children, young people and adults everywhere need to work together smoothly on projects stimulated by the war. In the spring of 1942 at Wayne University in the College of Education we bent our groups objective into a focus on "the other half of America." We scoured Detroit for helpers. We ended with a dramatic presentation of how Americans to the South of us live and work and play and with a respect which no other means could emphasize so clearly. In the fall we bent our groups efforts on a study of substitute materials of those not needed by the government, of salvage and thrift in the countless ways and things which we have overlooked in our carefree days of the past. We climaxed this groups activity in late November and early December by a show of what and why and how to meet these new needs at little or no cost from the odds and ends which are daily thrown into the discard of garbage and incinerators. We are wanting teachers and social workers and recreation leaders and housewomen to come and see what we have, with ingenuity, devised. The ripple will spread, all ripples do. We can learn to get along without almost everything which we once had and still be effective in the basic terms of which life is built.

(c) **For learning about things** and how they work. For emphasizing aptitudes and skills and imaginations and ingenuity. We have tragically for our own "good" become a people "short" on comprehension of materials and things and "long" on . . . stabilization. We learn to listen to radios and to talk over radio but we have failed to understand the mechanisms over which we listen and talk. Craftsmen are needed and craftsmanship is based on aptitudes and experiences with materials things as well as with the symbols for things. The arts and art teachers can perform a needed service if they gear their work to emphasize the aptitudes of people and to offer experiences in working with the materials of which things are made.

Space is defined and time is gone. Suffice it to say in conclusion that if we ignore the arts now we will have done something which our enemies have not dared to do. They have used to the full their resources for usual propaganda and for service to their destructive course.

WINSLOW HOMER • WAR CORRESPONDENT

By MARION MILLER

• Winslow Homer was born in Boston in the year 1836. His ancestors were Yankees, descendants of a Captain John Homer, who had sailed his ship to Boston in the seventeenth century. At the time of Winslow's birth, there was still a ship's captain in the family, his uncle Jim Homer, who traded between the West Indies and New England. The artist's childhood was spent in Cambridge, then a quiet town, with the country at its doors. It was here that the boy began to draw, and at the age of eleven he was showing remarkable talent. There is a conspicuous absence from his early pictures of the red house, blue sky, and green tree so common to childhood's painting. Instead we note that young Winslow was using his eyes and making astonishingly good statements of what he saw.

When he grew up, there was some talk of his becoming salesman for a hat company, but his father knew a Boston lithographer who took the eighteen-year-old boy into his shop. He learned a great deal at this apprentice work, though he used to say that he hated having his nose on the lithographic stones all day long. On his twenty-first birthday, Homer took a studio of his own and set up as a free lance illustrator, doing, among other things, covers for sheet music. Soon, he was having his illustrations accepted by Harper's Weekly, and, with the outbreak of the Civil War, Harper's sent him to the front as a war correspondent.

He covered Lincoln's inauguration, and then joined the Army of the Potomac. He sent back to New York innumerable drawings which were featured in the magazine, printed through the medium of wood engraving. He pictured the lighter side of life at the front. It is interesting to turn over the old files of the magazine and pick out the Homers from the other illustrations. They are drawn with vigor and acute observation and differ from the usual scenes of long-mustached heroes advancing in perfect formation to death and glory. They note what his eye saw—men around the camp fire while a negro plays a banjo and another dances, or a game of football on a camp holiday, or the interior of a hut at night, the men smoking, playing cards and telling stories. Why is it that in our schools we do not show these pictures to students instead of expecting them to memorize the events of the war from long history textbooks?

At the end of the campaign he went back to New York. Now came his first chance to paint. He attended night classes at the Academy of Design for a short time but didn't like drawing from casts—so gave it up. A painter showed him how to set a palette, and with only this training he started in. His first oils were of incidents in the war. He put two of them on exhibition—one **"The Sharpshooter on Picket Duty"**—and another—of which he said later, when he had really learned to paint, that "it was about as beautiful and interesting at the button on a barn door." Perhaps because he rather doubted his first efforts as a painter he declared that if the pictures were not sold he would give up painting and take a permanent job with Harper's. However, he was saved from this by his brother Charles who bought both pictures anonymously. Encouraged by the sale of his paintings, Homer finished several others of war subjects and sent them to the academy. Interest in the war ran high, and in less than a year, at the age of twenty-nine, he was made a member of the academy.

Just as the war was over, he exhibited **"Prisoners from the Front."** The New York critics all joined to call it the greatest picture of the war, and Homer awoke one day to find himself famous. Perhaps the subject, a union officer receiving the surrender of Confederate soldiers, had something to do with its popularity. The picture is now in the Metropolitan Museum and many people today find it the least interesting of his work, though it is undeniably strong and sincere. It shows a young Brigadier General of the Union Army examining three Confederate prisoners. One is a defiant young officer, one a very abashed boy, and the third, an old man with a long beard, whose age makes even more emphatic the youth of the soldiers.

There is in it none of the brilliance of color of his late period, but the design is well organized and the figures very convincing and appealing. The popularity of the picture in New York may have been partially due to the prestige of the principal figure—Brigadier General Barlow, who became after the war, Attorney General of New York State, (and in 1871 prosecuted the notorious Boss Tweed of New York City).

We are glad that Homer painted no more pictures of the war—though he could have gone on and made a small fortune doing so. Instead he turned next to the country in which he had spent his boyhood and we find in his pictures of farm scenes, of hunting, fishing and camp life, that he has found something which interests him deeply and that he loves doing. Later, while on a trip to England, at the seaport and fishing town of Tynemouth he seems to have discovered his deep love of the sea, not the quiet life of the harbor but the more dramatic moods of the ocean, stormy days when the water was a seething fury and the wives of the fishermen wainted in agony for the boats to come in.

Homer is the outstanding example of the self-taught artist. The only lessons he ever had were the three or four in which the French artist Ronald taught him to set up his palette. Always he had to discover things for himself, his independence made it impossible to learn from others. His seventeen years of magazine illustration gave him opportunity to perfect his drawing and to learn how to put pictures together. The work of his middle life shows him growing ever more powerful, more able to find the underlying truth of things in the midst of detail and more able to show it simply and forcefully. But it is the work of his latter life which is his best and which entitles him to his great place in American painting. In his small studio at Prout's Neck, Maine, he painted the magnificent seascapes which are the pride of so many of our public and private collections. His crowning achievement was the expression of the cosmic forces embodied in the sea, and this made him the greatest painter of the sea who ever lived. It made him also one of our greatest painters, and one of the first American artists to do justice to the granduer of his country.

CAMOUFLAGE

By LENORE MARTIN GRUBERT

(As practiced by the U. S. Army and recently exhibited by the 909th Air Force Engs. at R. H. Macy & Co., Inc., N. Y.)

● Camouflage, the art of protective concealment, employs every conceivable means of hiding or disguising troops, military operations, and supplies from the enemy. Although the significance of the term as applied to modern warfare is comparatively new, various methods of camouflage have been used throughout the ages. During the Trojan War, the Greeks finally captured Troy, about 1184 B.C., by a clever ruse of camouflage. The city was taken by means of a large hollow wooden horse, in which a number of the bravest Greek heroes concealed themselves, while the rest retreated to their ships. Thinking that the Greeks had given up the siege, the Trojans drew the horse within the city and proceeded to celebrate their apparent victory. The Greeks within the horse cautiously timed their appearance. Then, being joined by their companions without the walls, Troy was taken and destroyed.

William Shakespeare used the art of camouflage in "Macbeth" when he depicts Malcolm's advance upon the castle. Prior to this military movement, an apparition appeared to Macbeth saying:

> "Macbeth shall never vanquish'd be until Great Birnam wood to high Dunsinane hill shall come against him."

Later, in the play Malcolm speaks to his troops:

> "Let every soldier hew him down a bough, and bear't before him: thereby shall we shadow the numbers of our host, and make discovery err in report of us."

As they near the castle Malcolm cries:

> "Now near enough: your leafy screens thrown down, And shew like those you are . . ."

Our American Indian's decorative war paint also served as a camouflage which provided protective blending with his surroundings. Painting themselves with a variety of colors and shapes and adorning themselves with feathers, the Indians' bodies more easily blended with the forest. Thus they made a less conspicuous target for animals or arrows of an unfriendly tribe.

Animal life is well equipped with self protective camouflage. Nature has endowed wild life with color and pattern to blend with the natural habitat. From a distance the polar bear would appear to vanish into the whiteness of the snow. While the giraffe with his variegated spots is difficult to detect amid the vegetation of the forest. Snakes with their elongated bodies colored in earth tones are readily mistaken for branches of trees or plant growths.

And it is from nature's schemes that modern warfare camouflage gains many an inspiration. For example: in camouflaging planes, nature's way of "flattening" objects by lightening the under shadow side is a principle employed in painting air craft.

Because of the leading role airplanes play in present day warfare, existing camouflage tactics evolve about plans dealing chiefly with concealment from the air. To insure the maximum efficiency of any camouflage undertaking, certain essentials must be observed. These rate as follows:

1. Good position—50% (select the safest location).
2. Camouflage discipline—30% (keep within wired areas)
3. Proper erection—10% (care in construction).
4. Choice of material—10% (care in selection).

The eye is attracted by differences; therefore, instances of this principle are kept in mind by the camoufleur. He remembers the importance of:

Size—the visibility of large objects among small ones.

Shape—the conspicuousness of circular forms.

Irregularity—the obviousness of regular objects among irregular shapes or vice versa.

Alignment—the dominance of objects at an angle to regularly placed forms.

Color—the visibility of one color among contrasting colors.

There are nine standard colors used in camouflage: namely, light green, dark green, sand, field drab, earth brown, earth yellow, earth red, loam and olive drab. It is said that these colors and their combinations match any earth colors of the world at any given time of the year. However, modern camouflage is more interested in shapes and textures than color because at 5,000 feet color is obliterated and becomes tones. For example: From a certain height a woods or forest becomes a dark mass recognizable by its characteristic shape.

The materials used in camouflage simulate textures found in nature. The materials are so varied and so ever-changing that it is almost impossible to prepare a comprehensive list; however, it is interesting to note a few supplies in common use. The use of chicken wire garnished with chicken feathers dyed in earth tones is very successful. Net or chicken wire garnished with a zig-zag pattern of fringed strips of fabric dyed in the basic camouflage colors readily blend with the surrounding terrain. The colors used depend upon the natural background of the site of maneuvers. Canvas colored with disruptive painting and blending of colors has unlimited value, while natural materials borrowed from the environment are always in demand.

To obstruct the enemy's vision, camouflage uses three specific methods to conceal and to confuse. Camouflage HIDES . . . Dummy shacks might conceal an anti-tank gun. These shacks built of canvas and boards may be strategically placed where they best fool the enemy. A crew of four men can collapse the dummy in fifteen seconds and bring the gun it conceals into immediate action. Dummy tree stumps of bark, wiring, and net often hide snipers in battle. Tanks partially protected by disruptive painting can be concealed in a shelter of trees and bushes which are either natural or man-created. Camouflage trees are made of any material on hand such as: native foliage, tin cans, fabrics, or garnished chicken wire. Each throws a shadow that looks like the real thing from the air. And, the tree shadows obliterate shadows thrown by the object under concealment. Some of the artificial trees are so cleverly constructed that they sway in the breeze. "Flat-Tops," named after the old-fashioned buggy, might cover a machine gun. The "Flat-Top" is often constructed of garnished chicken wire or net and swings back to free the gun for action. The sides of the camouflaged unit may be made of simulated rocks covered with straw, branches, or leaves. Again, a "Flat-Top," lying only one foot above the ground, might conceal an anti-aircraft gun placed below ground level.

Camouflage BLENDS . . . By the use of pattern, texture, tone, and color objects can appear to merge with the immediate terrain. Jeeps might be camouflaged for desert war-

(Continued on Page 7)

WHAT IS PROTECTIVE CONCEALMENT: CAMOUFLAGE?

By MILTON S. FOX
The Cleveland Museum of Art

● Many like to substitute the term "protective concealment" for old term "camouflage"; the latter is often associated in the public mind with dazzle-painting, bizarre Rube Godlberg constructions, etc. Actually "protective concealment" today involves may technics not associated formerly with the word "camouflage. The word "camouflage" comes from the French, and was used there originally to denote fakery or deceit.

The terms "protective concealment" and "camouflage" may be used interchangeably. One sample definition of camouflage is, "science of confusing the identity of an object for the purpose of deceiving the observer." Another is, "any type of visual deception, either direct or indirect, which makes it harder for the enemy to find his target." In short, any device or activity which, regardless of the manner, makes it harder to find the target, or to arrive at an accurate judgment of its nature. For our purpose, this may be described as accomplished through: (1) Reduction of visibility (making it hard to see the target). (2) Changing the appearance of the object (changing its pattern, shape, shadows, color, form, texture, etc.). (3) Changing the apparent identity of the object (making it look like something else). (5) The use of dummies and decoys to take attention elsewhere. It is an attempt to outwit the enemy; the Trojan horse is an example: Shakespeare describes camouflage activity in "Macbeth."

"Let every soldier hew him down a bough
And bear't before him: thereby shall we shadow
The numbers of our host and make discovery
Err in report of us."

Kipling's "How the Leopard Got His Spots" is an excellent statement of certain basic principles.

Nature is the master camoufleur; many animals, bugs, birds, fishes, etc., being perfect examples of protective concealment. (See the book, "Adaptive Coloration in Animals," by Hugh Cott.) Military and civilian camouflage (the latter called "back-area." "rear-area," or "large-area") are based on the same principles, but in actual practice there are many points of difference: scale, previous reconnaissance, background, premanence, discipline, etc. In military, it may also mean false noises to divert attention; false thrusts or feints, fake gun flashes, fake signs of great activity, fake clues as to number or intention.

Camouflage is probably as old as warfare. Savages are very skilled in body treatment, in concealment by using natural cover (for example, the American Indian), in mimicry. Daniel Boone's garments were ideal for wear in the primeval American forests. During the Revolution the "red-coats" paid dearly because they insisted on wearing their parade-type of uniform, fighting in parade order, whereas the Minute-men imitated the covered style of the Indians. Americans must become more serious about protective concealment, both in the field and at home, especially in vulnerable areas. We are apt to "kid" about camouflage and "screw-ball" ideas; but many an American boy may be losing his life in the field because he is negligent about protective concealment; and we know that a large percentage of the bombs dropped fall on dummies, and away from camouflaged installations. Great quantities of the enemy's bombs, fuel, personnel, equipment, are wasted, sometimes whole raids exhausting themselves on "phonies."

The European countries are now spending enormous sums of money on various types of camouflage. It is nothing but a form of insurance—a kind of gamble against averages and probabilities. The main types of camouflage procedure to be discussed here are: 1. Tone-down, 2. Disruptive camouflage. 3. Dummies and Decoys. 4. Dispersal. 5. Complete concealment. 6. Blackout. 7. Light camouflage and glass barrage. 8. Smoke out.

Technics of Bombing.

Important to know these technics in order to know some of the things that determine how camouflage works. No body can say whether this region will be attacked, or when. If it is, the attack may perhaps come early in the morning. It is important for the success of camouflage to take into consideration the kind of shadow and lighting which will prevail at the probable hours of attack, and the different seasonal and weather conditions. It is not likely (one says with crossed fingers) that bombing will occur during those periods when weather is strongly adverse.

a. **Area Bombing.**

Many planes dropping their bombs more or less at random over a designated area, criss-crossing and "strafing" the whole region. Resorted to when targets are highly concentrated; when the general neighborhood, but not the precise location, of a target is known; when good camouflage makes recognition difficult; when weather is not too favorable, etc. The Nazis use it for terrorism—"schrecklichkeit"—since it is indiscriminate in its destructiveness It is very wasteful of material, and a large percentage of the bombs fell where they do little damage to important war activities. Ordinarily area bombing requires that the distance covered by the attackers are not too great. Area bombing is the "shot-gun" method.

b. **Precision Bombing.**

Contrasted with (a) this is the "rifle" method. Attacking bombardier fixes his bombsight on a specific target and delivers a bomb on that target; he may do this a few times, but ordinarily his bomb-load is small.

Briefly the precision bombardier wants to be pretty much on his exact course some 50 miles away. When he is about 10-15 miles away his course must be very accurate, leading directly to the target. About 6 miles away he must recognize his target in the bombsight and make preparations for the release of bombs; this point is known as "average target recognition," and is about 60 seconds away from the point of bomb release. About 4 miles from the target, and 35 seconds from the point of bomb release, is the "minimum target recognition" point; here the target must definitely be fixed in the bombsight and the bombsight set in motion. At the end of the 35 second period, the bomb is released. Note that the bombsight must be set in motion for the release of the bomb about 35 seconds before the bomb is delivered. It is the purpose of camouflage to make recognition tardy, uncertain, or difficult. Thus, if the bombsight is set in motion a second or two early, the bombs will fall short; if set in motion a second or two late, it will overshoot the target. At 270 miles an hour these errors will be of the order of 400 feet per second. It must be noted also that camouflage, directed against precision bombing primarily, must be effective at the bombing angle—some-

where between 35° and 60°. (All figures here are qualified by height, speed, wind velocity, etc.) Some people feel that a bombing in this region will be of the precision variety.

c. **Dive Bombing.**

A form of precision bombing, really. The plane itself is aimed at the target, dives from about 5,000 feet at an angle of about 70°, and about 1,000 to 1,500 feet from the target the bomb is released and the plane zooms upward. For really satisfactory results in either form of precision bombing the target must be clearly in the bombsight, and visible to the bombardier.

d. **Hedge-hopping.**

The planes come in low, swoop up over the target, release their bombs, drop low again, and off. Has many advantages of protection for the attackers against ground defenses. However, camouflage could be very effective against such fast-moving and short-range attack.

e. **Fire or incendiary bombing.**

Not really a technic of bombing, but another variety of area bombing. In this case, fire bombs are strewn more or less at random over a designated region, to fall wherever they will.

Observation.

We camouflage against observation from the air (with the exception noted in (a).

a. **Ground observation.**

Mostly in military usage; objects on the ground camouflaged against observers on the ground. On sea, camouflage of ships against ships or submarines. Ground observation includes, of course, direct and photographic observation, described below.

b. **Aerial observation.**

1. Direct. In the long run the most important, since the bombardier must see the target with his own eyes and in the bombsight for the best results. Against this type of observation alone, camouflage need not be so complete, theoretically, as against No. 2, below.

2. Photographic. The camera will reveal much that the human eye might miss; the photograph may be studied at leisure; comparison of photographs taken at different times will show up differences in the look of things.

a'. Panchromatic photography. Ordinary black and white photography with the familiar range of sensitivities to color and light.

b'. Color photography (Aerial). Not too satisfactory as yet but still, may reveal important data.

c'. Infra-red photography. Valuable because infra-red "cuts through" haze, giving sharp detail from great heights. At the same time infra-red sensitive film responds strongly to infra-red rays reflected or transmitted to the film; this manifests itself in the finished photo as very light. or white, wherever infra-red reflectance was present. Chlorophyl, nature's green substance, reflects highly in infra-red; thus nature's greens appear whitish in infra-red photos. This is not true of all natural greens (for example, those in many coniferous trees). Thus it becomes important that an installation, camouflaged with green paint, and situated in natural greens, should be made to reflect infra-red rays in the same intensity and distribution as that of the surrounding greens. Pigments have been invented which will do this; at the same time they match exactly the natural colors, as seen by the eye.

d'. Stereo-photography. The principle of the old-fashioned stereoptican; gives an astonishing three-dimensional quality, and shows relative roundness and modelling. These tend to beflattened out in ordinary aerial photos. Topographical differences of as little as three feet, and intervals of as little as one foot, can be detected in photos taken at great height, if viewed stereoscopically. Camoufluer must take this into consideration if he does not want his work undone, especially in military practice. Primarily, however, camouflage in back-areas is directed against the personal observation of the attacking bombardier.

CAMOUFLAGE

(Continued from Page 5)

fare with paint and garnished netting making its body outlines well concealed. From the air, both the Jeep and its shadow blend into the surroundings. Distorting the shapes of shadows is of major importance because shadows are a positive means of identification from the air. Shadows may indicate to the enemy the position of plane hangers, but camouflage can so alter the shape of shadows that the hangers appear, from the air, like part of the surrouding woods. This camouflage sometimes consists of dummy roofs of irregular shapes painted in disruptive color superimposed upon the structures. Or, merely disruptive painting and blending will help conceal buildings because the painted shadows and blobs of color destroy rigid outlines. In combat areas the concealment of men is vital. This is helped by camouflaged clothing and the painting of face and hands. Paint, clay, or mud removes the shine of a face which could be a perfect target for the enemy. Sniper suits are camouflaged so that they fade into the background leading to the suspicion that any bunch of leaves might be another soldier.

Camouflage DECEIVES . . . Camouflage often attempts to divert the attention of the enemy from vital points. Mock air fields might be built miles from where our bombers land. Simply constructed airplane shapes may be built exactly to scale which throw shadows identical to the usable model. Because surprise is a forceful weapon, camouflage at times tries to catch the enemy off guard. Decoy haystacks can conceal anti-aircraft guns or planes which are ready at a moment's notice to engage the enemy.

The importance of camouflage in decreasing the efficiency of the enemy cannot be over emphasized. Not only is it essential in areas of combat but to our total military effort. Airfields, supply depots, and hospitals are usually beyond the battle lines. The enemy, through aerial observation, attempts to locate them as a ready target for attacks. Camouflage helps to conceal these important positions with a saving of lives, time, and equipment. Moreover, a few seconds of confusion can mean the difference between success or failure to the enemy. The high altitude, oblique view, brief time for aligning the bombsight, haze or nightfall, are all drawbacks which help to make camouflage an additional handicap to the bombardier.

Although we pride ourselves upon recent progress in methods, materials, and ideas, it is realized that every enemy has well developed means of camouflage deception. Because no army is fool proof, our men too face the possibility of being be-muddled by camouflage; but every American soldier is given training in the principles of camouflage which will afford advantage in attack and a basis for an intelligent awareness of enemy deception. "Actual warfare has proven that troops protected by a knowledege of camouflage have a far greater chance of survival."

This article has been reprinted with permission of the author from CAMOUFLAGE, THEORY and PRACTICE by Milton S. Fox of the Cleveland Museum, Cleveland, Ohio. Copies of this mimeographed booklet may be had for thirty cents.

PREPARING FOR INDUSTRIAL DESIGN

By DONALD R. DOHNER
Head, Dept. of Industrial
Design, Pratt Institute

● We have been witnessing for nearly four years, a war of colossal scope and intensity; for the past year and a half we have experienced and participated in an "all-out" effort to stave off defeat and destruction. We have felt the disruption of our peace-time economy and the curtailment of all non-essential civilian products and services.

We will win this war! But in victory we shall unquestionably face a changed world. Great crises always produce great changes—political, social, and economic; changes affecting our lives at every point. The present world conflict is no exception; we face a post-war period of many years' duration which will be affected by the intangible forces of new concepts, new needs, new desires. We face a world seriously depleted of such familiar and necessary products as motor cars, typewriters, refrigerators, household appliances, furniture, and thousands of articles so essential to the American standard of living; we face a world of science and technology tremendously accelerated and expanded by the urgent necessity of winning a mechanized global war.

The slightest projection of our present knowledge and experience discloses some startling revelations; the magic development of new materials and ingenious uses of the age old, the expansion of the metals-producing industries, the refinement of old technics, and the rapid development through electronics and new automatic controls and the exploitation of the new "know-how." These achievements combined with new concepts and the demands of life in a new and better world find an eager and receptive public. Never has there been a public more receptive—rather, never has the public been so well prepared to be receptive to new conditions, new ideas and new designs.

Herein lies an unprecedented opportunity for those students of creative ability, with the essential aptitudes and qualities of mind and prepared by training to meet the rigorous demands of commerce and industry in this post-war period which will usher in a veritable renaissance of design.

The designer, like all imaginative and creative people, is a product of his space-time. The way he thinks and acts depends on the kind of a world he is living in. His concepts, his ideas, and consequently his work, are first conditioned by this ecological factor. Man is the focus! Protagoras, centuries ago, put it another way: "Man is the measure of all things." Any study of vital design, therefore, will of necessity begin with a study of man and his many activities in many fields of endeavor; a study of man and his world, his political, social, and economic world, his physical and material world, his tools and technics.

Few people, including those trained in the Arts, Sciences, and Technology, understand or are willing to concede the meaning and whole nature of design. It is an altogether human tendency for each individual to interpret so broad a subject exclusively in terms of his own particular interest or training. Design, like Art, cannot be defined restrictively, as if it were one single activity. Design is any skilled activity objectifying meaning and intention, conditioned and critically controlled by factors both tangible and intangible, and resulting in the solution of a contemporary human problem. Industrial Design is a term which is very misleading and in need of clarification. Industrial Design deals with the study, development and design of more marketable, more acceptable products (consumer, commercial, and capital goods) to be manufactured by mass-production methods. Industrial Design is more than a mere "dolling up" operation, or mere styling. Industrial Design has its source in a study of human needs. It grows to completion only after exhaustive examination, weighing and compensatory balancing of such conditioning factors as function, materials, manufacturing operations, costs, markets, distribution, and attributes of visual design. The appearance—the style—will grow out of these factors—it can never be extraneous and make sense.

But marketability, or mass-acceptance, is dependent on more than mere utility, quality of materials, workmanship, and price—important as these factors are. Mass acceptance is based on a balance of all the conditioning factors of design, not the least of which will be form, color, texture—style conforming to contemporary taste and trends.

It at once becomes apparent that industrial design can never be a solely inspirational activity. Industrial Design calls for more than talent and imagination to create; it calls for knowledge and comprehension. It furthermore involves a change of concept, for its differs **vastly** and **essentially** from handicraft design, which is, by its very nature, one of improvisation as the work progresses. Industrial Design, on the other hand, demands a **fully developed design** before the process of manufacturing begins—fully developed not only as it relates to human needs, functions, materials, machine-production technics, and costs, but also in those esthetic attributes controlling its appearance—distinction, timeliness, and, consequently, appeal.

Therefore, any Industrial Design program planned to prepare a student to meet the post-war needs and demands of commerce and industry must include thorough study and exploration of the following conditioning factors:

1—Ecological factors: a study of man in relation to his time and environment; his needs, his desires, his economy.

2—Functional factors.

3—Materials factors: It is unnecessary to stress the importance and awakened interest in this design factor.

4—Tools and tool-processes factors: We have passed from the machine-age to the power-tool-age. The urgency of winning a mechanized global war has so spurred American ingenuity and resourcefulness, that peacetime production can look forward to exploitation of the new "know-how."

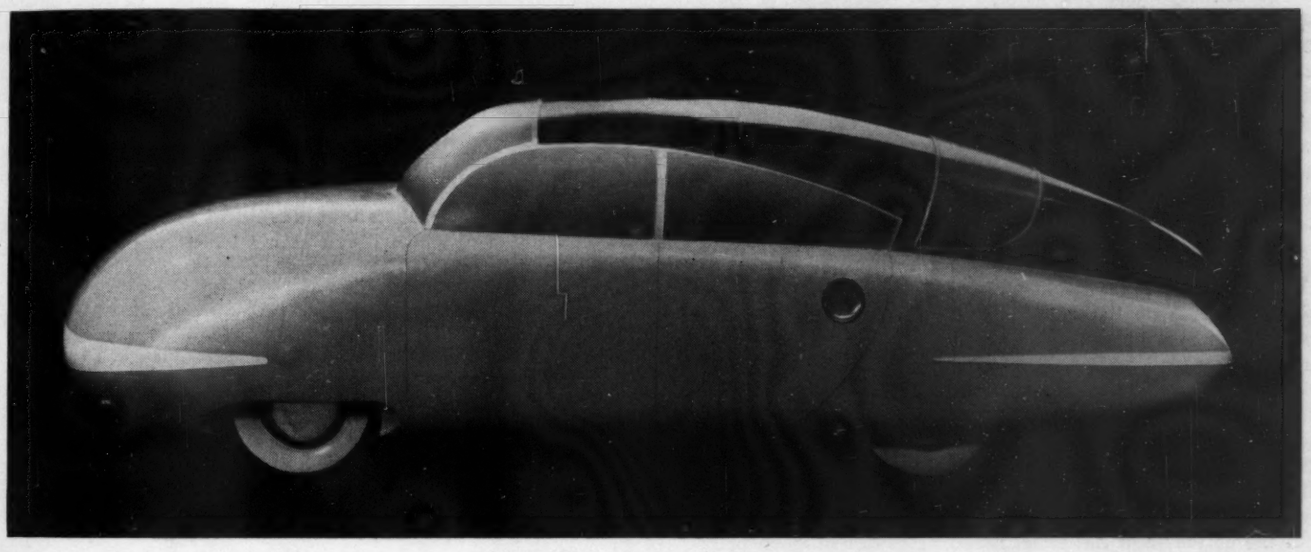
5—Economics factors: a study of factory and commercial costs; marketing and distribution, especially in the light of new markets and new buying habits.

6—Fine appearance factors: With many programs design begins and ends here, but appearance can be considered, studied, and used only in relation to all other conditioning factors.

To study and explore the potentialities of these factors adequately, it is essential that a school have well equipped shops and design laboratories. Only then can a student discover the inherent characteristics of a material—the potentialities of a power tool or process. Here he will learn to think through and around a design instead of wandering aimlessly on the surface of the imitation of a frozen form. Here he will learn to work with, and make clear to others, his ideas. Here he will develop the viewpoint of this scientific and technological world in which he lives.

This preparation meets but the minimum erquirements of the designer who is to take his place in the post-war

Plaster studies of utility line saving storage and shipping space through better stacking. Large number of items made from a few standard parts: lids becoming saucers and shallow dishes, etc. Designs by students of Pratt Institute.



One of many designs for the motorcar body of the next few years, permitting of lighter construction and greater vision. This particular design has the motor in the front: others have the motor in the rear. Designs by students of Pratt Institute.

industrial field. Further study of economics, the physical and social sciences, and the humanities is certainly desirable if the designer is to be the leader and co-ordinator he is in a position to be.

American manufacturing industry faces a vital two-fold problem today—that of planning for a speedy reconversion of production facilities after the war, and the development of new post-war products. Both of these related activities take time and must be tackled now, which unfortunately means an added burden on industries already loaded to the limit with war production.

But this paramount problem must be solved, and will be solved. The Committee for Economic Development recognizes the importance of product development and places it first on its agenda. To say that the American Designers' Institute is supporting the C.E.D. program is putting it mildly. The A.D.I. is closely cooperating with C.E.D. in helping Industry, and particularly the small industries, in their post-war product development. Both of these organizations are very anxious to have every capable designer available for they realize that only the **right** products will be of any value to this problem of full-time production and employment. The products will have to be right if we are to take up the 85 billion dollar slack after war production ceases. And right products are the capable industrial designer's meat.

This is a challenge to Education. We cannot help but agree with Harold Van Doren when he says "Industrial Design has little or no tradition, much poorly planned education, and so few binding standards of procedure."

The Industrial Design Department of Pratt Institute accepts this challenge!

DESIGN IN ACTION

By CHARLES BAYLY, JR.
The Denver Art Museum

● The popular conception of the bullfight is that of an over-gaudy rodeo ,made slightly disgusting by the gratuitous cruelty of its overdressed performers. So little has been written about it in English that unless one has read Hemingway it is quite likely he has never seen this idea challenged. This is not the place to try to disprove it, but I can say something about the visible and invisible patterns or design that are so much a part of it.

The costumes worn by the bullfighters are called "trajes de luce," which means "suits of light." We think of them, perhaps, as the sole relics of mediaevalism in modern sport, but they are actually fairly modern. There is some suggestion of the armor of the great Cid, but one has only to examine the etchings of Goya to see that the bullfighters of his day, when they were not actually Moors, turbaned and bloomered, were reasonably sedate in their dress. It was only in the nineteenth century that the real baroque flowered in the bull ring.

Presumably there was always color. Living as we do in an age of drab and indistinguishable made clothing, we hardly realize that the ordinary dress of the eighteenth century was so varied in hue and so universally higher in key than in our own time. The earliest colored records of the bullfight show that the clothing worn in the ring was actually very little different from the ordinary street costume, with the single exception of the hair-dress, which was and always has been distinctively the mark of the torero.

The most authentic history of the bull ring, written by Lorenzo Ortiz-Cañavate in the compilation called **Folklore y Costumbres de Espagna,** fails to trace the origin of the **coleta,** which we call the pig-tail, but which began by being a kind of snood, or net, holding the long hair of the bullfighter in a loose but unencumbering mass at the back of the head, the nape of the neck or even falling sometimes to the waist. Towards the end of the eighteenth century this began to be shortened to a small pig-tail, braided and tied with ribbon. It was a sign of the profession and was never cut until the bullfighter retired from the ring. "To cut the **coleta**" had the exact meaning of our modern prize-fight expression "to hang up the gloves." The **coleta** survives today, but is now worn only in the ring itself, not in public, just as the **trajes de luce** are no longer worn on the street. A three or four inch braid of hair is clamped to the hair of the head when the bullfighter dresses for a performance. The clamp is concealed by a convex shield made of black silk. To lose it in the ring is an immodesty comparable to losing a garter in a Victorian ball-room.

But if the pig-tail has declined in bravura, the rest of the costume has not. On the contrary, as civilian clothing for the male became more shapeless and somber, the costume of the bull ring became more ornate. The colors were already there, but the adornment increased. A color lithograph of Pedro Romero in my possession, shows him in yellow silk, brocaded with flowers, with loose, baggy trousers, a purple sash, an embroidered vest. Over the edge of the coat shoulder is a silken puff, which has become the heavily embroidered shoulder-pad. Only a few years later Costillares is pictured with a puff over the shoulder but it is already quilted with a simple design. By 1834 the elaborate incrustation of jewels and metal thread had become universal.

I have a print of Romero, also, dated 1800, showing him in a corslet, either of metal or of leather, with tight knee breeches. Within thirty years the armor had completely disappeared. It now survives only in the steel casing worn by the picador under his clothing on the right leg. This, of course, serves to protect him when the bull charges his horse, but it derives directly from the period when bullfighting, like jousting, was done only by knights, in full armor, and always on horseback.

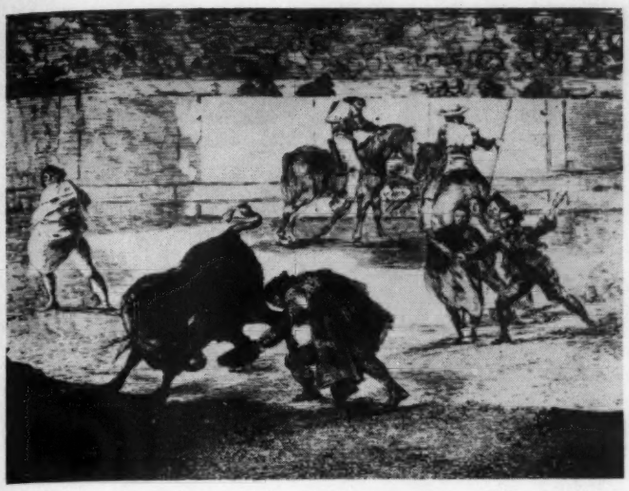
With the advent of long trousers in civilian life, the formalization of the costume of the ring took place. The jacket became shorter and the breeches tighter. I have a costume worn by Belmonte which was probably made about a hundred years ago. The jacket is so short as to be almost a bolero. There may be 12 ounces of silk in it, but the jacket weighs 14 pounds. Some of the embroidery, which is in actual gold and garnets, is over half an inch in thickness.

Nowhere before the middle of the nineteenth century do I find evidence of design in the capes. Goya shows the use of ordinary cloaks, but it seems probably that at that period any large cloth was used. This has come down to us in the **muleta** of today, which is simply a big piece of red flannel. In the modern bullfight, which is divided into three stages, the final act is that of the matador, alone with the bull. By this time he has finished with the cape and carries a soft piece of flannel, devoid of form or ornament. It is stiffened by an eighteen inch stick of wood sewn into a fold, which enables him to spread it with his left hand, while he holds the sword in the right.

But a larger part of the visual aspect of the spectacle comes from the capes which are used earlier. These are slightly more than semicircular in shape, with a radius of 40 inches, and the formalized semblance of a collar. They are not worn, however, but are entirely for use. They have no ornamentation, except color. Traditionally this is magenta, with the reverse in some lighter, very bright color, usually yellow or pale blue. It is not true that the color red has any special effect upon the bull. A bull no more distinguishes color than did the ordinary photographic film of ten years ago. It must be remembered, too, that the bullfight takes place in the afternoon, in Spain and in Mexico, where the sun is so intense that it has a faculty of sucking up most color values, and leaving only densities of light and shadow.

The great parade capes are quite a different matter. They are made of silk and are frankly pretty fancy. They are richly emblazoned with embroidery in gold and silver thread, and sometimes run to embroidered pictures of their owners. Strangely enough, the only time they are worn is for photographs. In the opening march-in, they are carried folded inside-out over the arm and are displayed only after the parade is finished, when they are handed to someone in the front row of the audience to hang, like jewelled banners, over the front of the boxes.

So much for the panoply, the color and glitter of the suits of light. They would be empty and meaningless unless behind them were not a subtler, profounder design.



Pepe Illo Cites the Bull by Goya

They are obvious and immediate. Generally, to an American, who is not born to the tradition, they are the whole show. The deaf, or the tone-deaf, might conceivably enjoy watching a performance of Jeritza in **Turandot** at the Metropolitan Opera, but would get nothing from hearing John Charles Thomas, in a sweat shirt, singing Mozart at the Bohemian Grove in California. The costumes and the color and the ritual of the bullfight are enhancements so important that they can sometimes threaten to outweigh the content but the art survives **because** they are enhancements. The music of Mozart is more important in the long run than the jewels of the Princess Turandot.

But what the content is, in the bullfight, is difficult to convey to those who have not been born to the knowledge.

There are spiritual conceptions to which we, as an Anglo-Saxon race, are completely cold. We think of a candle whose essential nature is to give light, yet Stark Young once described the effect of a cypress tree in an Italian landscape as that of "a candle or darkness." We think of life as all-important, and of death as a negation, and we cannot quite realize that there are races who are acutely aware that blood spilled upon the sand is not a barbarism, but a sacrament.

Make no mistake about it, every man in the bull ring is afraid of the moment when Death will appear openly at his side, but it is fear without the loss of pride, for he knows, too, that the pattern he is weaving makes no sense whatever unless you can see that Death is, visibly or invisibly, treading out the measure with him. That blind place in the design, which makes it seem preposterous to most northerners, like the phonograph records of Beethoven quartets with one instrument left out, is made visible and complete for the Spaniard. He may not consciously say to himself that he is participating in an ancient rite, but in his blood is an age-old knowledge of primitive religious form, in which Erda, the Earth-Mother, is made fertile by the spilling of blood. The cycle of life, in which Death is half.

The actual and visible design in action is something like the choreography of a ballet. It is precise, studied, formal and classic. That it is so often modified or discarded has nothing to do with its basic importance. A ballet can be learned and repeated **ad infinitum.** The improvisation of the action in the bull ring must be instantaneous, as it is forced by the bull, by the wind, or by the sun, yet the improvisations must still be within the outline of the pattern. The feet must still be kept in position, the back flexed to the prescribed arc, the elbows and the wrists retain their line.

Whole tomes have been written on a single phase of this pattern and there is no room here to give more than the barest indication of the complexity of the design. Let me quote Hemingway. He defines one single pass, a **natural,** as follows:

". . . a pass made with the muleta held low in the left hand, the man citing the bull from in front, with his right leg toward the bull, the muleta held by the center of the stick in the left hand, left arm extended and the cloth in front of the man. The cloth is swung slightly toward the bull to start him, this swing being almost imperceptible to the spectator. As the bull charges and arrives at the muleta the man turns with him, his arm fully extended and moving the muleta slowly ahead of the bull, making him turn in a quarter of a circle around the man; giving a swinging flip imparted with a lift of the wrist at the conclusion of the pass to hold the bull in position for another pass. This is the fundamental pass of bullfighting, the simplest, capable of the greatest purity of line, and the most dangerous to make."

A **veronica** is the basic pass made with the cape. I have always heard that it is so-called because the cape is grasped, a little bunched up to give a firm grip, in both hands in the manner in which Saint Veronica is shown in religious paintings to have held the napkin with which she wiped the fact of Christ. As the bull changes, head-on, the man moves his hands (and the cape) ahead of the charge to the right, so that the center of mass of man and cape slowly moves **outside** the edges of the man's body. The slower, slighter, smoother the movement of the arms, and thus the swing of the cape, the better the **veronica.**

These patterns must not be supposed to be arbitrary or entirely aesthetic, any more than the stance in driving a golf ball or the follow-through in a tennis smash is arbitrary. The **cruz,** in bullfighting, is the crossing of the sword arm over the arm that holds the lowered muleta, as the matador goes in to kill. He is said to cross well when his left hand manages the cloth so that it moves low and wellout, accentuating the cross made with the other arm, thus getting well rid of the bull, on his right side but with his left arm, as he follows the sword in. Fernando Gomez is supposed to be the first to have remarked that the bullfighter who does not cross in this way belongs to the devil at once. Another saying that Hemingway quotes is that the first time you do not cross is your first trip to the hospital.

This is not sport. This is not "teasing" the bull. It is, when it is right, great art, and it is as disciplined and studied as the laws of harmony. The bullfight critic of one of the Mexico City papers, for instance, writes:

"He extended his right arm, received the lowered horns in his cape, which he moved smoothly to the right. The bull followed the flowing curves. When the horns had passed his body Miguel advanced his left hand, slowly and with beautiful value, and pulled his right close to his belly so that when the bull turned he found himself facing the red percale again. The boy repeated his **veronica,** to the left. But this time, when the bull returned, he cut the movement in the middle and pivoted on his heels, bringing his arms up so that the cape flashed over his head in a **farol** of slow magnificance.. This boy has integrity and style in every pass he makes."

This is not the language of the sporting pages. Nor are the lines, written by Roy Campbell about the cape work of the matador in his poem on the death of Florentino Balderas in the bull ring at Valencia:

". . . his gentle hand,
From which those wide imperial moths were fanned,
Each in its hushed miraculous design."

CAMOUFLAGE IN THE SECONDARY SCHOOLS

A CLEVELAND PROJECT

By ALFRED HOWELL
Director of Art
Cleveland Public Schools

• Amongst the many art projects being carried on in the secondary schools relating particularly to the war effort, special emphasis is now being given to Camouflage. The sudden turn of events in the war brought immediate recognition of Camouflage as a means of stimulating interest; first from the viewpoint of Civilian Defense, and secondly, as a preliminary to possible work in the Armed Forces. The comparative newness of the subject and the limited materials available presented a difficult problem in organization. It was felt for instance, that the practice of this branch of war activity could not be effectively developed without some theoretical background. Through the generosity of the faculty of the Cleveland School of Art, a short intensive course in Camouflage was given to the Cleveland Secondary School Art Teachers, who in turn were able to work the essential phases into the Cleveland Course. This series was accompanied by a significant exhibit of Camouflage secured through the Museum of Modern Art.

It was then decided to provide each secondary school with a box of slides, about one-hundred in number, dealing with the theory of Camouflage, accompanied by a teacher's outline. The study of these materials, together with other available visual materials, was to serve as an introduction to the subject, after which, models were developed dealing with specific phases. The theory involved such areas as: Nature's Camouflage, Strategic, Tactical, Naval and Civilian Defense Camouflage. A further study was then made of the chief methods of Camouflage such as hiding, blending and deceiving, including decoy installations.

To reenforce the above aspects, a study was made of optical illusions based upon the findings of Luckiesh in his work on "Visual Illusions." This involved illusions of contour, illusions of contrast, illusions of perspective, equivocal figures, influence of angles, illusions of depth and distance, irridiation and brightness. The theoretical study in this phase was accompanied by the construction of diagrams which not only added value to the subject but gave considerable training in the handling of instruments for possible use in drafting departments of war industries.

We then turned to the problem of aerial observation, including direct and indirect observation. This involved the study of aerial photography including Panchromatic, Infra red, Stereo-photography and ordinary color photography. The interpretation of photographs through form, shadow, texture and color were then emphasized through the use of visual materials. Naturally this phase of the work was closely associated with "How the Bombardier identifies his target." With these considerations the next aspect related to what the camouflage planner must take into consideration, such as: Reduction of visibility, or "toning down." The concealment of prominent approaches to an installation, proper screening and the elimination of shadows, deceiving by changing the identity of an object, and dispersion through fake installations including decoys and dummies. The classes discussed such questions as: How to blend the target with the surrounding terrain. What are the best sources of give-away for the bombardier? What are some of the types of objects difficult to detect from the air? What are some of the dangers of reflected light in camouflage? These questions constitute a few of the many essential things relating to hiding and deceiving.

It then became necessary to study the most useful camouflage devices disclosed as a result of experiment such as the distortion of shadows, the use of nets, strips of cloth, steel wool and the standard types of color authorized by the Army Authorities. A consideration of these materials was naturally associated with all types of planting of types of shrubbery and the most economical use of limited available materials. The problems of blackout, smoke screen, interior illumination, obscuration, etc., were given consideration as to their importance in Civilian Defense Camouflage.

Now, what so far has been the outcome of this study, and what future considerations should be given? The first effect of the course was to add considerable stdength and prestige to the Art Departments in the Secondary Schools. Secondly, it drew the attention of many students who would not ordinarily take and art course. Thirdly, it has had a definite trend toward closer cooperation with the Pre-Flight Aero-training which may be adapated to war requirements other than camouflage, such as, scientific drawing, drafting and model construction.

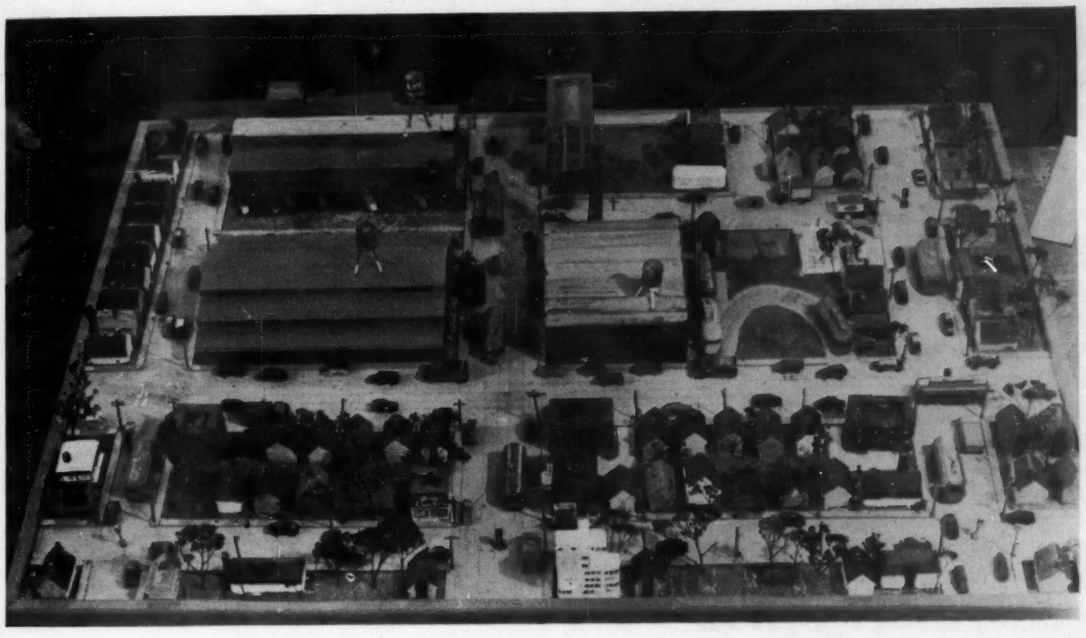
In a general way we may summarize the individual projects of drawings and models so far carried out as follows:

1. Decorative painting showing the principles of nature's camouflage.
2. Principles of Industrial Camouflage.
3. Angle of Target Recognition.
4. Dispersion of Facilities.
5. Important Types of Communication Structures and Roads.
6. Shadow Distortion.
7. Disruptive Painting.
8. Gun Installations.
9. Personal Camouflage.
10. Composite Groups of Factories, Residences and other civic elements.

The above list is only a partial one, for naturally there are many offshoots. What the future for such a course is likely to be will no doubt be influenced by the length of the war. However, principles and skills will have been developed which will no doubt have considerable effect upon other projects of a constructional nature during the Post-War period.

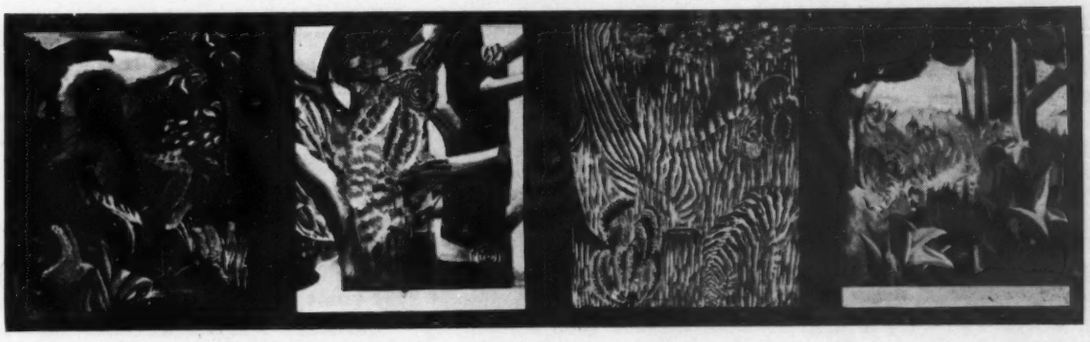
Cleveland High School students work at problems of camouflage.

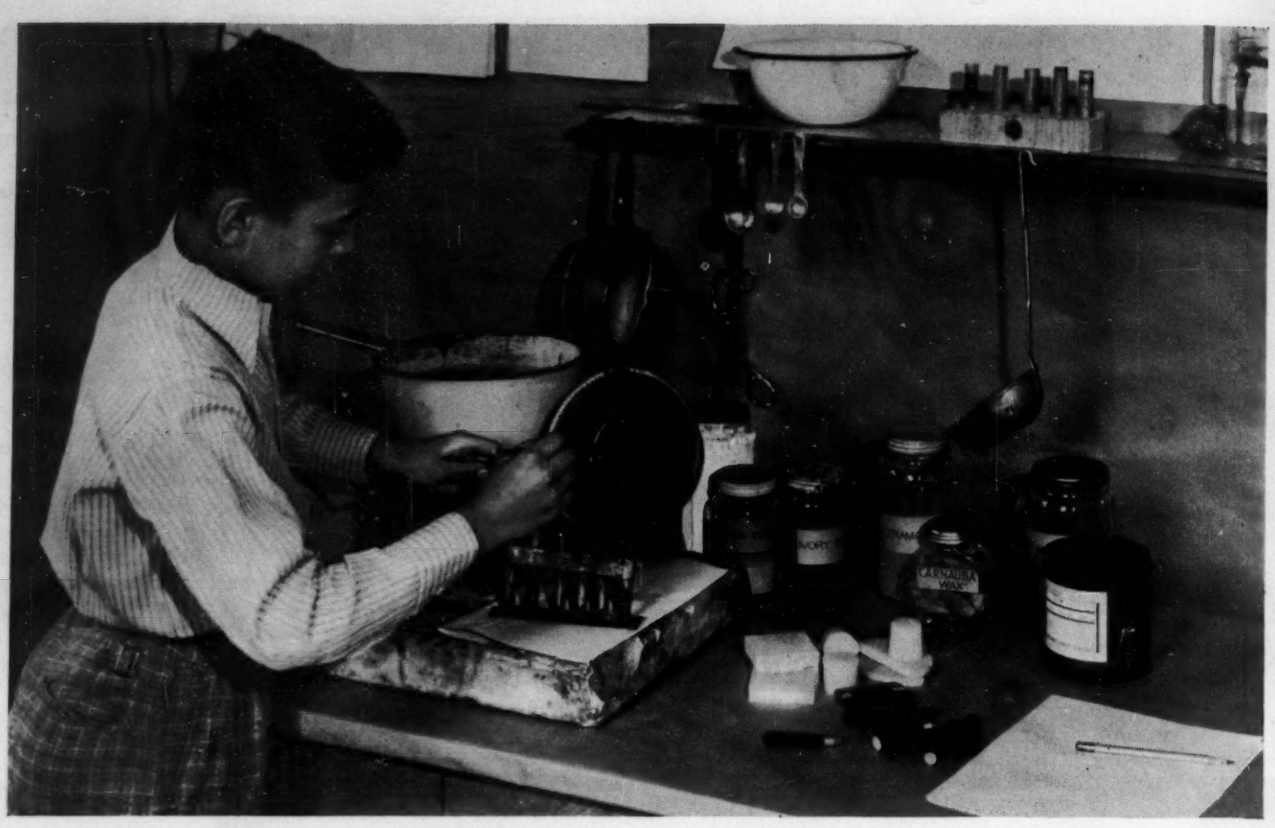
Left: A camouflaged factory area by students of Edison High School, Cleveland



Left: A camouflaged factory area by students of Edison High School, Cleveland

The panels at the right show the principles of Nature's camouflage. These were made by students of West High School, Cleveland, Ohio.





MAKING WAX CRAYONS

ART MATERIALS STUDENTS CAN MAKE

WAX CRAYONS

By JAMES W. GRIMES
Ohio State University

● The kind of wax crayons we use today are an example of a very ancient art material usually associated with the Greek culture. The way, however, in which we employ these crayons is essentially modern. We draw with them on paper, whereas the Greeks melted them and used the hot colored wax very much as we use oil paint today. They called this process of painting encaustic and it is still a very good method of painting although rarely done in our times. The thirty-fifth book of Pliny the Elder's **Natural History** gives us some information about how the Greeks painted in wax, and Greek literature is full of references to it. For instance, Serveus the Alexandrian, writes as follows:

"Nothing is more powerful than beauty since it can seduce us even through colors, can even cause our souls to succumb through material means. It triumphed with colored wax and it compelled the painter to love his work, lending, so to speak, a voice to wax, and the ability to speak to the painting, **"l'Encaustique el les autres Procedes de Peinture,** by Henry Cros and Charles Henry, Paris, 1884. Trans. by Theauthro.

Our modern wax crayons, however, differ in several respects from the wax paint used in Greece which was made from beeswax and pigment. This material, while it works well for painting, does not make a good smooth mark on paper. Other ingredients must be added to beeswax to make a good crayon. Also in commercial crayons there is probably very little, if any, pigment, dyes in many instances being used to color the wax. This article, however, deals with the method of making wax crayons with pigment, waxes and other ingredients. We are fortunate in having two native plant waxes, Bayberry Wax and Candella Wax, which make excellent crayons with no other addition than color.

We can, however, make crayons from many kinds of wax. For convenience we first need to classify this material. There are five categories of waxes: vegetable wax, insect wax, mineral wax, chemical wax and animal wax.

1. Vegetables Waxes

Bayberry Wax. The bayberry plant grows in the Eastern United States. A low growing bush with aromatic leaves, it is covered in the autumn with blue grey berries. The wax comes from these berries. To remove the wax the berries are boiled in large cauldrons. After cooling the wax forms in a cake on the surface of the water. The well known bayberry candle is made from this material. The melting point of bayberry wax is 45-46 degrees C.

Candella Wax. The candella plant, Pedilanthus pavonis, grows in North Mexico and Southern Texas. The entire surface of the plant, stems and leaves, is covered with the wax. The wax is secured by boiling the plant. The melting point of this wax is 68-70 degrees C.

Carnauba Wax. This comes from the leaves of Corypha

cerifera, a palm tree indigenous to tropical South America. The melting point of this wax is 84 degrees C.

2 **Insect Waxes**

Beeswax. Produced by bees (apis mallifera). Melting point 62-64 degrees C.

"To obtain wax, boil the combs in a strong muslin bag in a saucepan with water sufficient to keep the bag from burning, and whilst boiling continue to press the bag with a wooden slice or spoon, to extract the while, as you skim off the wax. Drop the wax into cold water, where it will swim on the surface. The wax thus obtained will still want refining, to effect which, place it in a clean saucepan, and melt it over a slow fire. Then pour off the clear wax into proper vessels, and let it cool. To whiten it make it in thin cakes and expose it in the sun." Ohio Cultivator, Vol. VI, p. 25—1850.

3 **Mineral Waxes**

Parafin. Melting point 48-62 degrees C.

Parawax. Melting point 51-58 degrees C.

Ceresin. Melting point 61-78 degrees C.

4 **Chemical Wax**

Stearic Acid (Stearine). Melting point 60-65 degrees C.

5. **Animal Wax**

Spermaceti. Produced from the sperm whale. Melting point 42-50 degrees C.

By means of various combinations of these waxes and pigments, or dye, wax crayons are produced. Tallow is a useful addition in the home-made crayon. Tallow may be secured from any butcher.

How to Make a Simple Wax Crayon

First make crayon molds. These can be made of tin and you will want to get hold of an old candle mold and take that for a model, making your crayon mold, of course, considerably smaller. Paper molds are also serviceable. To make these take a piece of paper about four by six inches. Starting at one corner roll the paper into a tight, slightly funnel shaped cylinder. Paste the loose edge so as to hold the mold in shape. Then take about a quarter inch of the bottom or narrow end of the funnel and turn it back, making a sharp crease at the bottom. This closes up the bottom of the mold and will prevent the hot wax from running out. This mold will make a round crayon with a wedge shaped end, in some ways a more functional tool than the pointed or round ended crayon. Many kinds of paper molds can be made.

The process of making the crayons is simplicity itself. You melt your wax or waxes, and the powder color, stir well, and then pour the hot colored wax into the molds. As has been remarked, bayberry wax and color, or candella wax and color, make workable crayons with addition of no other material. However, beeswax alone make a very poor crayon.

The following are suggested recipes of a simple nature:

1. Bayberry wax plus powder color.
2. 2 parts bayberry wax
   1 part tallow plus powder color
3. 2 parts bayberry wax
   1 part tallow plus powder color
   1 part carnauba wax
4. Candella wax plus powder color
5. 1 part candella wax
   1 part tallow
6. 1 part candella wax
   1 part tallow plus powder color
   1 part carnauba wax
7. 1 part beeswax
   ½ to 1 part tallow plus powder color
8. 1 part beeswax
   1 part tallow plus powder color
   1 part carnauba wax

Many more elaborate recipes than these can be made. All the waxes listed can be used and combined in various ways. It all depends on the working quality you desire in your crayon.

An important thing to keep in mind is that the higher the melting point of the wax mixture, the harder a crayon you will have. The great value of carnauba wax in crayon making is its high melting point—a factor which has made it an important article of commerce.

You will probably find it desirable to have crayons of varying degrees of hardness and softness. Remember, the more tallow you put with the wax the softer and greasier your crayon will be. Very soft crayons (not available commercially) are extremely valuable for working over drawings made with harder crayons and are particularly useful for small children.

You do not have any worries in wax crayon making. It is almost impossible to go wrong. If you do not get enough powder color in your wax mixture you can tell what is the matter by the thin waxy line the crayon makes. Put the crayon back in the pot and add more color. If your crayon is too hard, add a little tallow or a wax of a low melting point.

In making these crayons students should be encouraged to experiment, to keep records, and to tabulate their results. Science, as well as craftsmanship and creativeness, has a place in the art room.

In this series of articles which give the specific information necessary for making and locating a wide range of materials used in art and allied fields, two objectives are primary:

1. To meet the needs of teachers who have limited economic resources for the purchase of art materials,, and to suggest ways and means of substituting for materials now needed in the war activity.
2. To present art projects which:

a. Are exciting and stimulating for children.

b. Utilize local and community resources.

c. Require cooperative action on the part of groups of students.

d. Provide opportunity for the development of hand skills.

e. Lead to inquiry in a wide variety of fields of learning.

f. Stimulate the working together of such areas as art and science.

g. Establish a wide range of projects providing student opportunities for creative experiences with materials.

The following sub-titles indicate the scope and nature of the series:

1. The reed pen.
2. The quill pen.
3. Pigments to be found in Ohio.
4. Grinding oil paint.
5. Tempera paints, poster and gouache.
6. Watercolor.
7. Paper.
8. How to make charcoal for drawing.
9. Wax crayons.
10. Lithographic crayons for drawing.

KANSAS CRAFTS AND CRAFTSMEN

By THELMA PENCE

● "Kansas, shall we civilize her—or let her civilize us?" was Irvin S. Cobb's question less than twenty years ago. The answer is beginning to come. Kansas shows unmistakable signs of civilizing herself!

Kansas is producing native born craftsmen who are winning prizes in national competitions in the fields of ceramic sculpture and silver smithing and whose work is being shown in museums throughout the country. Others are doing distinguished work in weaving, woodcarving, forging, pottery and gem cutting. There are hundreds of people in the state from children to grandfathers who are working in various ways with clays, silver, copper, wool, and wood or are collecting and polishing pebbles found in their own door yards or on frequent trips to adjoining Colorado and states west.

Bernard Frazier, the state's outstanding young sculptor, working at Lawrence, sees the crafts movement in Kansas going back to the time of the prairie Indians with their "engaging porcupine quill work and pictographs on buffalo hide." The pioneer women who followed, our grandmothers, express their hunger and need for beauty in the meager materials at hand. These crafts took the form of quilts and coverlets and of rag carpets; of pleated fans of colored papers to be hung on the walls of the "soddies" or little frame houses of the early days. Mr. Frazier tells of his own grandmother making "fine whatnots by stringing polished black walnuts on wire, of jugs covered with Indian arrows and soldiers buttons and such bits of brightness as were available to her" "She made still life groups of prairie flowers from the feathers of birds she encountered in the new land." All these things, he says were crafts work born of the same urge which drives the modern craftsman.

It is the opinion of those who have come of age in the Kansas crafts movement, that the cultural life of the state owes much to Birger Sandzen the Sweedish American painter at Lindsborg and to Rosemany Ketcham for many years a teacher in the department of design at the state university in Lawrence. Both gave conscious direction and encouragement to the esthetic hungers and drives which up to their time had been largely unconscious and undirected in the young people of the state.

The depression decade of the thirties may well have been an economic instrument which forced many young craftsmen back upon their home communities at a time when they would normally left the state for study in more urban areas or abroad. This phenomenon was good for both the craftsman and the region as it forced the artist to grow and develop from within rather than to become the artistic shadow of some more crystalized art community on the east or west coasts. Margret Craver from the little western Kansas town of Copeland was such a person. She was forced back into a rural community as a public art school teacher. From that she has grown to the stature of a silversmith whose silver and enameled box pictured, won for her first prize at the Philadelphia Art Alliance Handcraft Exposition in 1940. She is instructor in forging in the school of the Wichita Art Association and is a focus of interest in the arts and crafts which center around the Wichita Museum. Meanwhile she has been able to study in Sweden with the famed Baron Eric Fleming silversmith to HM. the King of Sweden and with Arthur Nevil Kirk of Detroit.

Bernard Frazier, mentioned above, was once a farm boy of Athol, Kansas. His "Rebekah," a garden sculpture of native clay is now being shown in the Metropolitan Museum as is his sculptured horse "The Fractious One" which won for him a prize at the Syracuse Ceramic Exhibition.

Cherokee' a twenty-six inch head of reed firing clay found on the University campus has been shown in many museums throughout the country.

Marjorie Whitney, at present teaching in the department of design in the University of Kansas is a weaver of unusual skill. She does fine work also in woodcarving and pottery.

Gladys Bate who has long been a teacher of art in the Wichita High School and who has given invaluable esthetic sustinance to the Wichita community, is an expert craftsman in ceramics and weaving. Her pieces of ceramics were thrown, glazed and decoratede by her and the background linen woven by her.

To one accustomed to thinking of ornamental iron work in terms of New Orleans, Charleston or Philadelphia, it is a distinct surprise to come upon such a craftsman as G. J. Kubitschek of Salina. He is a descendant of a family of Bohemian iron workers and though in business as a blacksmith, finds time to turn out fine candlesticks, grills and other special pieces.

Strictly speaking one of the best woodcarvers in the state is not a Kansan but a Swede. Anton Pearson has been in the United States since 1912 and in Lindsborg most of that time. Pearson is many things beside a woodcarver. He is a newspaperman, an engineer, a rock gardner, a painter and an oil man. His favorite subjects as a woodcarver are the work worn pioneer types of older Kansas people who are fast disappearing. These he carves from memory, in walnut, bass or gum woods and occasionally in soft limestone.

Orlin Baker's work is unique in the field of crafts. It is that of a gemcutter. Growing out of a hobby it has almost turned Mr. Baker from his profession as a civil engineer at Great Bend, Kansas, to that of a full time lapidarist. He collects, polishes and cuts native pebbles as well as those from the mineral rich neighboring states. Mr. Baker's craft has its contagious aspects as the basic materials for its practice are at hand for the stooping. He works with the lithographers stone as well and is well known in graphic arts circles in the state.

Morman Plummer of Lawrence is unique too, in that he is a scientist as well as master potter. As a ceramist of the State Geological Survey he has

REBEKAH, a terra cotta garden figure thirty-six inches high by Bernard Frazier. It won the Kansas State Prize and the Mid-West Sweepstake Prize. It has been shown in the Santa Fe Museum, Chicago Galleries, and the Metropolitan Museum of New York City.

done valuable work in research in Kansas clays and their mixing and glazing problems.

There are many other craftsmen at work in the state but who are not so well known among them are Edith Crist Richie, Franczeska Frazier, Maragret Clevenger, Lucille Almgren Runbeck of Lindsborg who for twenty-five years has been educating children and adults in the state in the satisfaction of creative work; first as a teacher of public school art and then as director of the art section of the Kansas Federation of Women's Clubs.

There seem to be three major centers in the state around which the craft movement has grown: the State University at Lawrence, Bethany College at Lindsborg with Birger Sandzen, and the Wichita Art Association and Museum. Those who have been nearest to the growing interest in the crafts, have seen in it an effort towards self-cultivation and the expression of life as well as the practical business of earning a living. It is significant that among three dozens of students who come to the Wichita Art Association School for study there is a large proportion of mothers and housewives, business men and engineers as well as youngsters just embarking on study with the idea of becoming "artists."

These young students are coming to the teaching centers much more mature than formerly. Bernard Frazier writes from the State University Department of Design, "students are coming to us with as much skill as some of us had when we left school."

"The situation is cumulative and in my opinion will be of great value to the state." As to the characteristics of Kansas crafts work he has this to say: "I believe I see a sort of hard bitten tenseness about our native work which would not exist in such degree except in other prairie states of our type." We are not well situated for being clever so we are inclined to pack an extra punch in the way of expression." Margaret Cravers opinion on this subject is interesting too. "The East is bound by tradition and the West coast is captivated by the new. Isolated as we are from these influences we can develop works of distinction, works that have grown up from within."

Perhaps it is in Kansas, the very center of our country, that the balanced life in each region for which Louis Mumford so ardently works, has begun to send out its first green shoots to contribute to a local self-respect and a world culture only three generations from the time of its first settlements.

INDEX OF AMERICAN DESIGN

● On the balcony of the Great Hall of The Metropolitan Museum of Art were recently hung seven oil paintings, copies of "American primitive" landscapes by Olaf Krans, showing daily activities of the Bishop Hill Pioneers of Illinois, 1846. These landscapes are supplemented by water color renderings of sixteen objects created by crafesmen of the colony. Historically descriptive labels outline the events in the rise and decline of the colorful sect.

The Bishop Hill Pioneers were as ardent in their religious convictions and pioneering spirit as the Mormons or the Shakers, but their sect was relatively short-lived and consequently their history is not well known throughout the Urinted States. It is, therefore, especially fortunate that the Illinois project of the Index of American Design has supplied us with a pictorial record of the colony.

Eric Jansson, a Swedish evangelist in disagreement with the Established Church of Sweden, was the leader of a group of converts to his doctrine. Jansson's followers accepted him as a divine leader, and the first of their devotion to the new cult eventually resulted in their flight from Sweden to the "Land of the Free." Their final destination was a spot on the fertile prairies of Illinois where they founded the Bishop Hill Colony. From a very humble beginning in 1846 the community, under the leadership of Janson, grew to great prosperity, with its 1100 inhabitants enjoying wealth and commercial prestige. Today, however, it has deteriorated to a population of less than two hundred twenty-five persons.

The group of seven paintings, copies of the work of the self-taught and talented "folk painter" Olaf Krans, include Dugouts, a landscape showing the first crude dwellings used by the colonists in 1846, with one house, that of "the Prophet." In **Sowing Grain** and **Harvesting** men and women form neat patterns of figures, and twenty sunbonneted women are lined up with hoes in military formation across a cultivated field. **Women Working on a Pile Driver** shows in an interesting composition of grouped grey figures the strenuous work assigned to the women who shared all the manual duties of the settlement. **Haying,** subtitled **It Will Soon Be Here,** shows a violent thunder storm approaching rapidly while men, women, and children load an ox-drawn wagon with fresh hay. The crafts of the community are illustrated in water color drawings of costumes, furniture, and architectural details, such as a newel-post, a brick decorated with incised design, and a lantern from a hotel.

THE DIORAMA AS AN ART PROJECT

A TEACHERS COLLEGE AND A MUSEUM OF NATURAL HISTORY HELP STUDENT TEACHERS FORGE A NEW TOOL

By **NATALIE WILKINSON,**
Associate Professor of Art,
New Haven St. Teachers Col.

By **HILLIS L. HOWIE,**
Chairman, Sch. Serv. Dept.,
Peabody Museum, Yale Univ.

● The increasingly successful use of dioramas by museums and expositions for the purpose of presenting significant ideas to mass audiences must certainly impress educators with their actual and potential value as teaching aids. Since the properly constructed three-dimensional scene creates an illusion of reality, it seems to "tell the story" of historical episodes and geographical environments,—in fact, of any obective subject—better than words. There seems to be some basis for thinking that these dioramas promote permanent learning because most adults have distinct and lasting impressions evoked by Christmas nativity scenes ,miniature stage sets, or models of ships, temples, and gardens. As evidence of recent recognition of the role of the diorama in education, museums are making greater and greater investments in this type of display, and particularly in the collections made available as loans to schools. Some of the larger institutions are offering instruction to teachers on the methods of diorama construction. The cooperative project between the art department of the New Have State Teachers College and the school service department of the Peabody Museum of Natural History, Yale University, is an instance of the way in which a teacher training institution makes fuller use of a community resource and cultivates the interest of its students in this new teaching tool.

At the outset, we were agreed that potential teachers should know more about a museum and its facilities, that they should come to an appreciation of dioramas through first hand experience of making one, and that, in as much as problems of perspective, proportion, and color are involved, the planning and construction of a diorama would constitute a profitable art class assignment. Various interpretations of the word "diorama" were discovered, and the one which we considered most comprehensive defined it as a "miniature three-dimensional group consisting of an arrangement of small modelled and colored figures and specimens, with accessories, in an appropriate setting and in most cases artificially lighted. The scale and size of the group is variable; there is no standard shape; there is no lmiitation as to subject matter, which may be realistic or imaginative according to what the creator of the group wishes to portray." This was taken from an article by Irene Cyphers in **Educational Screen,** September, 1942.

In the preliminary discussion it was noted that the diorama as a teaching device may be used in either one of two ways. A teacher may make one (or borrow one) for use in helping children to comprehend some otherwise obscure phase of the subject under consideration. Words call forth a fairly adequate image, pictures give a more definite and fuller impression, but a three-dimensional representation is often the most satisfactory means of all for establishing correct basic concepts. The other way of using a diorama as a teaching device is by having the children construct their own, on the theory that the person who writes a book, paints a picture, or constructs a diorama is the person who gets the most fun and satisfaction. From fourth grade up, children can work profitably on models; in the lower grades, it may not be desirable to have children work on small scale, though it must be admitted that sand tables offer excellent possibilities for scenes which might be considered dioramas without frames. Used in this way, the diorama serves as an incentive for individual research in order to make the reproduction or creation as convincing as possible. Just as a mural or a pageant or play is sometimes used as a summarizing experience in a unit of work, the diorama, too, may tie together the efforts of several students. As children find pleasure in making things with their hands, the construction of the diorama may also be another means of expression besides talking. writing and acting. This source of personal enjoyment may very well carry over to home and other out-of-school leisure time activities. And lastly, building things in the ground gives emotional release and relaxation of body tension. The project appeared to be amply justified.

As an introduction to the project, the Junior Class of the college first discussed the influence of dioramas in their own lives, and studied pictures of dioramas including photographs of Norman Bel Geddes' models of battle terrain and sea fights as they appeared in **Life.** Next the students visited the Peabody Museum to see examples of professional diorama construction. Though the museum possesses no miniature groups, the full scale habitat groups illustrated the technics involved in creating the illusion of distance. the use of curved backgrounds to suggest the dome of the sky, the use of objects to break the line where the horizontal ground plane meets the vertical background, and the use of matching colors in the background and foreground so as to achieve a transition from the real material to the representation. Advantages of high and low eye levels in perspective were pointed out, as well as the effects of top, side, and back lighting. Formulae used for the simulation of water, and materials used by the museum preparators in the manufacture of foilage and other accessories were given for whatever suggestions they might offer to the students.

After this each student made a choice of some significant subject from the field of history, geography or literature, and in some instances the topic chosen was from the student's other studies after collaboration with the instructor. Next it was decided to limit the space to either a cigar box, shoe box or slightly larger container. The students were encouraged to represent their subjects either naturalistically

HOUSE OF SEVEN GABLES, a diorama made as a cooperative project between the art department of the New Haven State Teachers College and the School Service Department of Peabdy Museum of Natural History.

or with flats, as in a stage production, and to experiment with installations, either as seen through a large framed opening as in a show case or through a small round opening as in a peep show. From this stage on the student's ingenuity was given free rein.

To include a complete list of materials used would be impossible in this short article, though the following list gives the most important ones:

Background: paper curved to eliminate the back corners of the box, and painted to simulate sky and topography. For more permanent construction, plaster of Paris over hardware cloth makes for both vertical and horizontal curvature of the backdrop.

Solid construction: wood, paper mache, clay, plasticene, plaster of Paris, a mixture of corn starch and salt. Ice cream straws may be used to represent logs.

Flat construction: card board, tag board, corrugated box board, and tin can metal. Corrugated straw board gives the effect of tile roofs.

Figures: clay, plasticene, soap, wax, pipe cleaners, clothes pins, stuffed cloth.

Foliage: natural and artificial sponge, dried natural vegetation, various fibres, such as cotton, crepe paper.

A good example of an especially appropriate accessory is to use red berries from a barberry hedge to represent Mexican chili peppers. When strung on a thread and dried, they look like miniature garlands. The illusion is perfect when they are hung against an abode colored wall.

The day on which the fifty completed dioramas were brought to class was an exciting occasion. In the main corridor of the college building, a display case filled with a representative selection attracted the attention of the whole school. Students and faculty, impressed by the exhibit, suggested several unanticipated uses for the more effective dioramas. One set was circulated in the three training schools of the college with the provision that the children of each room could live with them for a day. Others were displayed at a meeting of the "Behind the Scenes of the Museum Club" of a local junior high school where they stimulated the interest of some of the "junior preparators." Several dioramas exemplifying especially successful use of materials and principles will be incorporated into a portable loan exhibit on the subject of "home-made" dioramas being prepared by the school service department of the Peabody Museum for circulation in the elementary schools of New Haven.

In evaluating their products, the students used the following criteria: significance of topic illustrated, authenticity, ingenuity, workmanship, portability and permanency. A different set of criteria would have been used to appraise the work of children. It was noted that in dioramas made by children, technic and workmanship are unimportant in comparison with the ingenuity exercized and what the experience of testing the textures, resistances, and possibilities of a variety of materials has done for the child. The benefits derived from this project by most students were: experience in making and using a new tool for teaching, increased confidence in the use of new media, and the satisfaction of carrying a piece of individual research to a conclusion. Like all worthwhile projects, it will probably be repeated.

ARTISTS IN THE ARMY SIGNAL CORPS

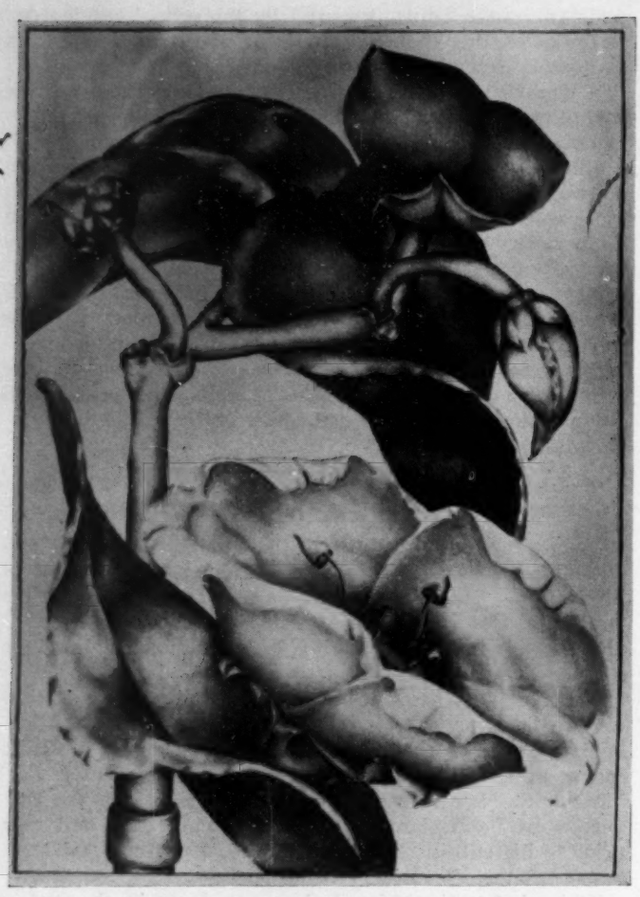
● Artists are supposed to be gay, irresponsible fellows quite incapable of working except under the stimulus of inspiration. But that concept has been shattered by the work of artists who have gone into uniform and are accomplishing the many and varied jobs that need doing in a modern army. Many of them have found their peculiar talents a decided asset in helping train their fellow-soldiers

Take the case of Cpl. Efty M. Kyprie of Detroit, Michigan, a Signal Corps instructor in the Elements of Radio course at the Eastern Signal Corps Training Center, Fort Monmouth, New Jersey. Kyprie is a graduate of the University of Pennsylvania's School of Fine Arts and was, prior to his entrance into the service, a portrait and landscape painter of considerable distinction.

While instructing Signal Corps students in the proper manner of distinguishing series and parallel resonance, he conceived a demonstration board that combines a small light bulb in conjunction with a variable inductance as part of a resonant circuit. Adjustment up to and away from resonance is effected by regulating the position of an iron core in the induction coil. In use, it has been found to reduce to the minimum the required time for this study.

Another way in which a Signal Corps "artist" is making use of his talent to forward the training of Signal Corps soldiers is contained in the story of Pvt. George H. Strand of Los Angeles, California. Strand worked as an artist in Los Angeles before coming into the Army and is attached to the Western Signal Corps Replacement Training Center at Camp Kohler, California. Learning of his talents, the Commandant of the Western Signal Corps School, which is located on the campus of the University of California's School of Agriculture at Davis, California, "borrowed" Strand to paint four huge panoramas to be used in teaching Signal Corps soldiers blinker code. The paintings are being done on 8x12 panels of plywood and will be set up in the college library which has been converted into a class room. The murals will show typical scenes of Europe, China, Africa, and the South Sea Islands, so that no matter where the trainee goes, he will, in general, recognize the terrain of his field of action. Blinkers—small searchlights—are used to send messages at night. It is one of the supplemental means of transmitting information and orders used by the Signal Corps when radio or wire communications are not established, or when the need of security make this use advisable. The blinker lights at the school will be installed in appropriate spots on the paintings to stimulate field conditions.

"Art for Art's Sake," the ancients said long ago. Not today it isn't. Today it is art for the sake of an Army on the march.



A Flower composition by Patricia Nickols, Ohio University, Athens, Ohio

A Flower composition by Mary Katherine Carter, Ohio University, Athens, Ohio

Drawing From Plant Life

By HAZEL WILLIS

Associate Professor of Design

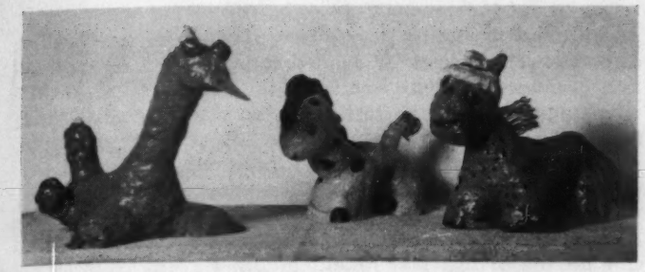
Ohio University, Athens, Ohio

● There is a different way to look at plant life and see form rather than light and shade, that adds interest to the drawing, since the artist must put something of himself into the composition rather than record just what he sees.

Our first work is drawing from nature to learn how the plant grows or is put together—noting the details of stems as they join the main branch—the foreshortening of petals and leaves—the appearance of overlapping parts. This first step is for information. The next is to arrange the branch in the space so that the negative pattern or background is just as interesting as the positive or plant form.

Then we start with a crayon pencil to give it roundness or fullness of form. We arbitrarily think of the light as being directly in front of all rounded or curved surfaces, so that the part nearest the light is the highest part and as the surface recedes we make that section darker. The tone is put in roughly and rubbed smooth with a paper stump. One must think clearly and state the darkness or lightness of tone right the first time as there is no successful tone over an erasure. Flat surfaces may be graded in any direction so that edges may be tricked into showing as dark against light or vice versa. More interest is gained in the composition by distinct changes in local value of the leaves and flowers by using a wider or closer range of values.

The illustrations given are from the first or second problem and we use a plain white background as it is less confusing for a beginner. Later we go into more elaborate compositions in still life using a complete background and full depth of space expressed with values.



ANIMAL KINGDOM IN NEWSPAPER

By JOHN G. KEMPER

● Decorative animals made of newspapers are not only a great deal of fun to make but they afford an excellent opportunity for creative expression. A few inexpensive materials—newspapers, paste, poster paint and shellac—are all that are needed for the making of these creatures.

Newspapers and paste are the ingredients for the pulp papier mache which is the substance from which the animals are modeled. It is prepared as follows: Crumple many single sheets of newspaper which are then soaked in water, preferably hot. Tear the paper into shreds or rub it on a grater until it is free from lumps and is as fine-textured as possible. Remove all surplus water by pressing out the pulp between toweling or by some equally effective means. To form an animal about seven or eight inches high enough paper pulp should be prepared to fill a quart fruit jar.

The paper pulp is now ready to be mixed with paste. Wall paper paste serves the purpose quite well. This can be bought by the pound in dry form. Or inexpensive paste can be made by mixing flour and water to a creamy consistency; pour boiling water over it and allow the mixture to boil for two or three minutes, stirring it constantly. When the paste is cold it should be about the consistency of custard pie filling. Mix together the paste and pulp, using about half as much paste as paper pulp. If the mixture has a tendency to fall apart when squeezed between the fingers, it is too dry and should have more paste added to it. On the other hand, should squeezing it cause drops of water to ooze from it, the papier mache again should be placed between towels and have the surplus water removed

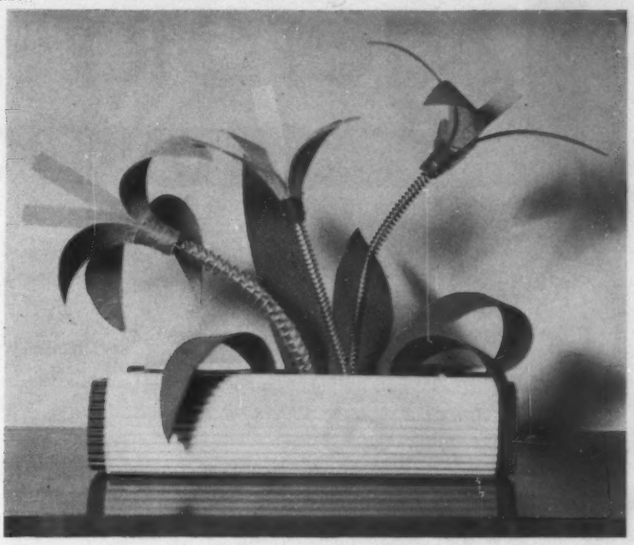
In order to prevent fermentation especially during warm weather, it is advisable to add a few drops of oil of clove to the papier mache (Fermentation does not impair the usefulness of the pulp. However, the odor is apt to be rather unpleasant.)

The papier mache pulp thus prepared is about the consistency of clay and is used in much the same way. In order to make it possible to create a somewhat larger animal with the amount of papier mache at hand, a core can be used in the body. This core can be a piece of wood, a wad of dry newspaper tightly rolled and tied with string, or any other suitable material which may be at hand. The basic structure of the figure having been established, finish the modeling, taking care to make the surfaces as smooth as possible.

After the modeling of the animal is completed allow it to dry thoroughly; the time required for drying will vary—perhaps a day or two, depending upon humidity, temperature, etc. If it is desired to hasten the process this can be done by drying the animal in a slow oven for several hours. When thoroughly dry, the figure will be quite hard and durable.

The painting of the work permits opportunity for very decorative, colorful and imaginative treatment. Stripes, dots, all-over design and original decorative treatment of the features (eyes, nose, mouth, ears, toes, paws, etc.) add considerable character to the finished product. Ordinary poster or tempera paint can be used.

The animal having been painted, a thin application of shellac should be used as a final step and protective coating to complete the figure.



FLOWERS FROM SCRAPS

By JOHN G. KEMPER

● The subject of flowers and their arrangement has long been one of interest to many. While we usually think of living or growing flowers there is much to be found of interest in creating the flowers themselves, using not expensive materials but discarded scraps and odds and ends of almost every description. And of particular significance is the use of such cast-aside materials with the present war effort making many previously used items difficult if not impossible to obtain. Thus can we turn to the countless discarded items about us which in ordinary times we would relegate to the waste basket. And thus we will come to realize the almost unlimited possibilities that these materials offer—possibilities which until now we may have failed to recognize. Not only is this true in regard to the flowers discussed here, but in many other creative activities as well.

To a large extent the materials at hand will determine the design of the flowers. To compile a list of materials that might be used would be almost endless, however some of the odds and ends used to create the flowers illustrated include the following: colored corrugated paper, cigar boxes, sheet cork, spiral coils, yarn, colored construction paper, scraps of a woolen blanket, burlap, suede paper, wire (a broken coat hanger), bent strips of tin, wooden beads, cardboard boxes, felt scraps, wooden bead molding, large headed pins, a dictaphone record, colored chalk, tempera paint, shellac. Still other materials which might be used include raffia, sandpaper, cellophane, buttons, paper candy dishes, paper cups and plates, ric-rac, corks, foil paper, shavings from metal lathes, wood dowels, vitamin capsule box trays, thread spools, milk bottle caps, toothpicks, cloth and linoleum scraps, oil cloth, onion sacks, scraps of wire screen, plastic bottle closures, poker chips, popsickle sticks, macaroni, seeds, acorns, scraps of leather and countless other odds and ends which will come to the reader's mind.

These materials—and many others—with a little paint, a little ingenuity and a lot of fun will grow into fantastic and imaginative flowers never before seen.

ART FOR VICTORY

By DOROTHY WILKINSON

Head, Project-Experiment Division

The Committee on Art in American Education and Society

VVV

THE WAR CHANGES OLD PATTERNS.—Everyone at the present time is feeling the impact of the war, some of us in a deeply personal way, all of us through a changed way of living. The patterns of life which we have established have been broken down and we are having to evolve new patterns to adjust to the changes about us, at the same time that we are trying to preserve those values which give life meaning and zest.

Art teachers are asking themselves; "Is the arts program as it is now operating contributing as effectively as it can to the war effort? If not, what can be done about it? Is there a discrepency between demands at the moment and permanent values? How can the stabilizing and enriching influence of the arts be brought into lives badly upset by the war? What of the designing and building the future will need? How and when will these designers and builders be trained?

VVV

THE ART TEACHER ADAPTS TO NEW NEEDS.—Such questions and many others, not simple of solution confront the art teacher. The projects undertaken by members of the Committee on Art in American Education and Society indicate some ways in which teachers are attempting to work out the answers. The whole hearted response of members shows their complete agreement that everything possible should be done as soon as possible to further the war effort. They are using the many means at their disposal to bring about this end. In spite of a lack of materials, crowded programs, and outside war activities which have taken much time, the effort is a determined one. They are not only meeting requests which come from all sources to assist national and local organizations through publicity, but are working out original methods of bringing to public attention some of the values of our democratic way of living.

One of the most urgent demands has been for posters—posters of all kinds: for relief agencies, scrap drives, stamp and bond sales, air raid directions, plane recognition, nutrition, and victory gardens. These are but a few of the kinds supplied by teachers through their art classes.

In many communities school art departments have been given the opportunity to use store windows for weekly displays. This means of achieving publicity has application in other situations as well as the present one and this advantage must not be lost after the war for it is a link between students and community. It provides students with experience in arranging exhibitions and gives the exhibitions a fresh interest for the community. In Delaware children made afghans of knitted squares which made a window decoration to advertise the need for knitting for the British War relief. Another group from Delaware made small models illustrating the activities of Civilian Defense, and still other models expressed the meaning of the four freedoms as interpreted by a sixth grade. Such exhibitions are significant in ways other than enlisting help for worth while causes. This means of participation is important for it brings a deeper understanding of our national organization and what it hopes to achieve, even to young children.

VVV

ART WORKS IN THE WAR EFFORT.—Esther Bensley of New Platz, New York, writes of a window at the State Teachers College. "This has a change of contents every week. As occasion warrants the contents publicize current appeals. Last week were displayed original documents of the militia of 1814. This coming week will be for the Red Cross Drive. Later insignia of civilian defense with arm bands will be shown. In between times it is a window to bring arts and crafts of other nations to the attention of the students."

Other possibilities have been seen in decorating for special occasions using some provocative theme. Georgia Hagberg of Kenosha, Wisconsin, writes, "We decorated the gymnasium for a P.T.A. milk fund festival using "What can I do to help in Civilian Defense" as a theme and goes on to describe six large cartoons 4x6 feet, each illustrating Prepare Homes, Spend Right, Study the War, Observe Black Out Regulations, Don't Hoard, and other decorations dealing with related subject matter.

Another member, Dorothy McIlvain of Spokane, Washington, describes the making of a map in a sixth grade which necessitated making three slides and projecting them to get an outline. The map showed the United Nations, Axis, and Axis occupied territory, countries which have broken relations with the Axis, nations friendly to both sides, Vichy France, ship lanes and air lines, United Nations army and navy bases. A number on each country indicates the order in which they went into the conflict.

Many members are engaged in teaching the regular war courses. These were spoken of at length in a recent article in this column. Still others are giving their time in addition to their classroom work to the study of art therapy under the direction of the Committee.

Emma Lennon of Boston, Massachusetts, writes of a map made at the Massachusetts School of Art for the Civilian Defense Division of the Massachusetts Safety Committee for use in teaching officers the methods of defense in the event of bombing of New England industrial areas. It was developed in topographical relief and made up in four sections, each 21"x29". It was so constructed that two sections could be fastened together and carried in suitcase fashion. The map is typical of New England and shows hilly and flat areas, country communities, suburban and urban districts, manufacturing developments, railway lines and junctions, main highways and country roads with overhead and under passes and also rotary traffic circles.

Bridges, loading docks and a dam were included in relationship with the highways. All types of buildings, suburban homes, hospitals, schools, churches, small manufacturing plants, farms with their barns and silos were constructed thereon.

The map was built on a plywood base which was reinforced to prevent warping. The base was covered with chicken wire which was shaped to form the required surface. The wire was then covered with a thin fabric and then a fine papier maché made of tissue paper and wall paper paste was applied over this wire and formed to the final surface. When this dried out the main highways and river beds were sanded smooth to contrast with the slightly rough terrain. The railway lines were made by sewing fine wire to a narrow tape and gluing the tape to the surface of the map. The buildings were carved out of soft wood and then painted various colors. The type of construction of each building was designated by letters on the roof of each building as was also the height, for example, 3 & R.C. meant three stories reinforced concrete, or 2 & W, two stories wood. The buildings were glued to the papier maché. Many other building situations were created and constructed on heavy cardboard which were to be used to epresent typical city blocks and other areas. These extra sections were not built as an integral part of the map, but were to be placed anywhere on the map to create new situations. The map and buildings were painted in tempera paint and the whole was given a heavy coat of shellac. Different colored threads indicated gas, water, electric and other services.

The problem of keeping the entire construction as light as possible was of great importance as it had to be carried by one person to many different places. The scale used was ⅛" to fifteen feet.

VVV

ART WORKS IN COMMUNITY PROGRAMS.—The Community has been receiving great emphasis in general education in recent years and offers limitless possibilites for the arts. By helping to bring the school and the neighborhood into closer relationship, many projects undertaken by members are serving the war and looking toward postwar needs. Studies in community planning with visits to slums and housing projects focus the students' attention on the need for better living conditions. Painting, modeling, crafts, and shop classes held at the school and open to those who live in the neighborhood, give wider use to the school plant and result in social as well as creative development. Dramatic performances, puppet plays, and speakers are other means of contact with the community.

Art teachers are constantly being asked to assist in furnishing color schemes and advice in decorating homes. A bureau created for this purpose in schools where the size of the student body makes this practicable would give real rather than theoretical situations for students to handle.

Most art exhibitions held in schools are likely to be attended only by parents of those exhibiting, and even they, sympathetic as they are, are often confused and at a loss to understand children's painting and judge results wholely by their realistic appearance and accuracy or their similarity or lack of similarity to adult work with which they are familiar. More extensive captioning of exhibition materal can give these parents and others viewing the work an understanding of the processes involved, and the motives lying behind what has been done.

Projects which tend to carry many aspects of art beyond the school walls and into the community are described by members. Edith Knox of Rockford, Illinois, is working on "A unit on art problems in home planning designed to make direct use of community architects, landscape architects, industrial designers, interior decorators, etc., in planning 'budget homes,' by students of senior high school level. This community is fortunate in that it is the center for furniture designing and manufacturing. The course will attempt to make practical application of art to problems of living, and acquaint the student and the public with ways the artist contributes to community life."

Dawn Kennedy of Montevallo, Alabama, writes of the activities of the Alabama State College for Women. "Last week I was asked to talk to the Civic club here and I discussed the increasing importance of the small town. I was invited to come back the next time since the men said it seemed they could not do much until they understood more about color and design. They had asked particularly that I discuss the matter of improving the appearance of the town.

"We have attacked this problem more or less from the standpoint that even though people cannot do very much at the present time, planning what to do in the future can be recreation for this time. A group of students made models which they thought would fit into the landscape and contour around here. These were displayed in a window downtown with notices suggesting that people 'take a walk, select a lot, and plan a home of tomorrow.' The proprietor of the store where there were displayed said that there had been nothing in the window that had created more interest."

In the same community Miss Kennedy mentions, "Students are sending out an exhibition of their paintings to the camps in the state. One of the students is going to a small rural community two days each week to teach art in the school."

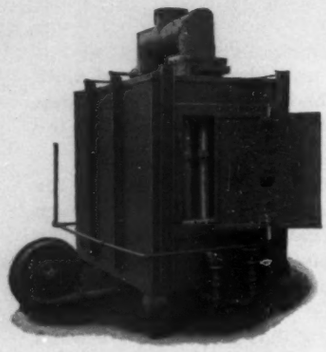
Pansy Mills of Richmond, Indiana, writes of her school art program which includes the community. "This last Sunday was our opening for the exhibition of Russian Paintings by Frank Horowitz largely with talks by Mr. and Mrs. W. B. Stoddard on "Life and Culture in the Soviet Union." The high school orchestra gave selections of Russian music.

"We are acting as a center here for a poster contest for Cancer Control in an area covering more than one-fourth of the state. We are also acting as a center for a series of art classes for small township schools including art teachers from surrounding schools."

Another member tells of assisting a clay modeling group which meets once a week free of charge. The members are doctors, internes, and their wives, and nurses. One member is the mother of four children. She works during the day and does clay modeling with her children over the week end. Once a month the members of a potters' round table meet. This is a group mostly of amateur potters. many of whose children are in the war. One of the members built a kiln, which they are using free of charge except for the fuel.

Letters from many parts of the country, asking questions, exchanging viewpoints, indicate the zeal with which art teachers are facing present issues. They are convinced of the need of keeping alive the creative spirit which for the moment must be focused on one specific objective—that of winning the war. They are sure that the future will need painters, sculptors, industrial designers, architects, and engineers. They know that children and adults must have every opportunity to develop those appreciations which will make them demand a better way of living in the future. They are laying the foundation through art training for those whose vision and knowledge will help to provide it.

Your KERAMIC KILN must *outlast* the "JAPANAZIS"!



Regardless of how long the war lasts your Keramic Kiln will have to "keep firing" for the duration.

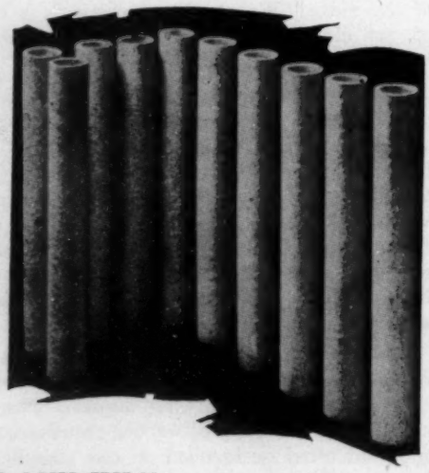
Thank your lucky stars if you own a Keramic Kiln. But even this rugged and dependable kiln can wear out or parts fail. Check over your equipment now; see if repairs should be made.

Patch up all leaks. Replace warped tubes. Install new tiles in floor, combustion chamber, and muffle lining whenever distortion or other form of wear effects the perfect operation of your kiln.

IMMEDIATELY AVAILABLE:

Hi-K Tubes * Clay Shelves * Shelf Supports * Fire Box and Muffle Tiles * Latite * Hi Fire Bond

HI-K TUBES . . . bring you greatly **stepped-up** thermal conductivity. Thinner walls, yet they outlast ordinary fire clay tubes two-to-one. They cut firing time (fuel consumption) 20%.



LET US HELP ON ANY KILN MAINTENANCE PROBLEM!

The DENVER FIRE CLAY Company

EL PASO, TEXAS · NEW YORK, N.Y. · DFC · SALT LAKE CITY, UTAH

DENVER, COLO., U.S.A.

ROAD TO VICTORY EXHIBITION IN HONOLULU, ENGLAND AND SOUTH AMERICA

● When Edgar Schenck, director of the Honolulu Academy of Art came to New York he said: "Approximately 70 percent of the Japanese-American children in the High and Junior High Schools of Honolulu saw the ROAD TO VICTORY exhibition and for the first time had a graphic illustration of the resources and power of the United States. This is true of most of the 12,000 children of all races who saw the exhibition. Very few of them, even those of native-born American parents, have ever seen what is to them all their homeland. The magnificent photographs of the farms, cities, factories and people back home give a many-faceted picture of the United States that is intensely moving and re-assuring to those far from the mainland."

The Honolulu Academy of Arts has been open and functioning at capacity every day since Pearl Harbor. The attendance has been good, and at least 50% of the visitors are from the armed forces. A great many war workers, who two years ago were doing construction engineering work in the United States, also visit the art exhibition at the Academy. In fact, it is because in the past year the great recreational and morale value of art has been proved that Mr. Schenck made his flying trip from Honolulu. He is particularly interested in developing further cooperation between the Honolulu Academy, the armed services, and government war agencies.

Mr. Schenck said: "The enormous value of the Road to Victory exhibition is obvious. That value is increased a hundred-fold because it was not shown as propaganda but as an art exhibition of fine photographs selected by Lt. Commander Edward Steichen, U.S.N.R., whose own reputation as a great photographer is world-wide. The text by Carl Sandburg makes it much more than a photography show, and the Museum's arrangement of the pictures in mounting sequences of drama and climax added tremendously to the effect not only in the Japanese-American children, who had no real idea of the United States mainland, but on the men of the armed services stationed in Honolulu to whom it brought the impact of home. It gave these men great pleasure to see the familiar scenes they had so recently left behind them and to see the record of their own and other armed forces in action."

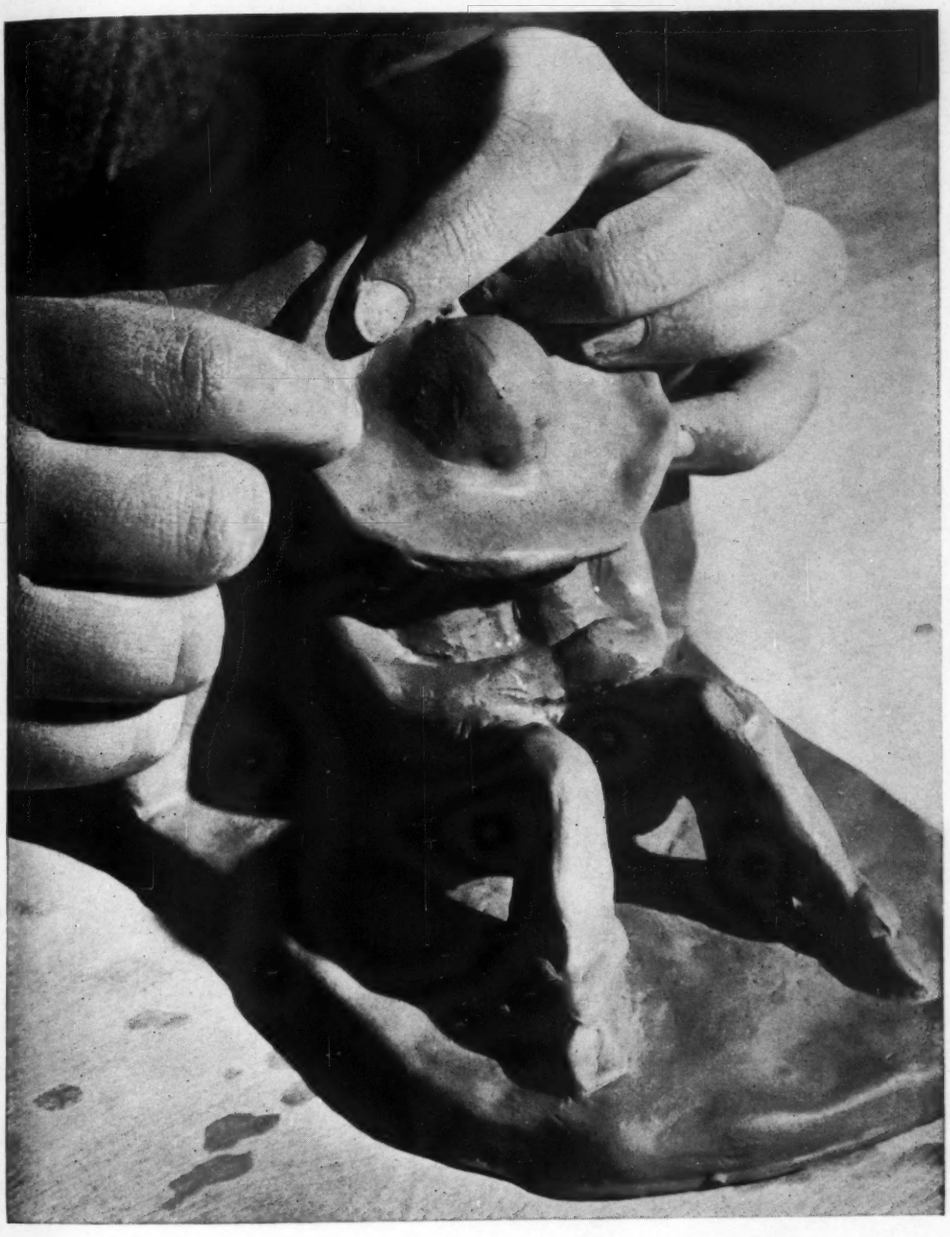
After a tremendously successful showing in London, where 66,000 saw The Road to Victory exhibition in less than three weeks, it is now touring the British Isles. The two remaining editions with the Sandburg text translated into Spanish, were sent to Uruguay and Colombia, South America, at the request of those two governments.

STORY OF SPANISH AMERICAN FOLK ART IN THE SOUTHWEST

● SANTOS, the Religious Folk Art of New Mexico by Mitchell A. Wilder and Edgar Breitenbach with an introduction by Rudolph A. Gerken, Archbishop of Santa Fe. Published 1943 by The Taylor Museum of The Colorado Springs Fine Arts Center. This is a handsomely illustrated and carefully documented survey of the painting and sculpture of the Spanish American farmers who lived along the Rio Grande during the Eighteenth and Nineteenth Centuries. The collection upon which this study has been made is from The Taylor Museum of The Colorado Springs Fine Arts Center. The book discusses the historical background, the technology and the devotion to the Santos, a review of the art of the Penitenetes and a complete bibliography on this vital but little known subject . . . the indigenous folk art of the Southwest. The book has been designed by Oscar Ogg, set in Estienne type and printed under the direction of Edward Alonzo Miller, at The Marchbanks Press, New York. There are 64 large collotype illustrations printed by Meriden Gravure Company, with full descriptive captions. The book is 8½x11 and is bound in full buckram. A first edition of 2000 copies, 1700 of which are for sale to the public, has been printed. The price is $4.00.

Order NOW! Only a few copies left.

Create Something



By FELIX PAYANT

A HANDBOOK THAT WILL PROVIDE HELP FOR THE ART TEACHER, THE STUDENT AND THE AMATEUR.

★

A COMPACT REFERENCE BOOK • UNDERSTANDABLE • OVER 200 ILLUSTRATIONS 168 PAGES 6"x9" • BEAUTIFULLY PRINTED • PRACTICAL • MEETS YOUR MOST URGENT NEEDS.

★

The two hundred illustrations have been chosen with care to give reality and clarity to the various sections of the text, and include many pictures of pupils and artists at work with various materials and mediums. Based on the idea that we are never as happy as when we are creating something, this book will answer many needs for amateurs, teachers and students in every field of art. Order yours now.

In **Create Something** the author presents materials on the creative arts in such a manner as to make it understandable to the beginner without sacrificing its value to the advanced student or teacher who requires a compact reference book. A new world is opened to the amateur who is seeking new constructive forms of recreation as well as education. It is the author's belief that experiment rather than following traditional lines of procedure is vital. Satisfaction and pleasure along with sound value may be found in this book.

Paper Binding
$2.00

Cloth Binding
$2.50

DESIGN PUBLISHING COMPANY, COLUMBUS, OHIO

$2.00
Postpaid

Now is the time to buy this excellent book

DESIGN TECHNICS

A COLLECTION OF HELPFUL IDEAS • EDITED BY FELIX PAYANT

For a Graduate
For a Soldier
For a Library
For Classroom
For a Teacher
For an Artist
For a Craftsman
For a Professional
For an Amateur

—•—

52 PAGES 8¾" x 11½"
HEAVY PAPER PAGES
STURDY BOARD COVER
40 ART TECHNICS
100 ILLUSTRATIONS

FREE BRUSH PAINTING ★ CONTOUR DRAWING ★ PAINTING WITH PENCIL ★ THREE DIMENSIONAL DRAWING ★ CHARCOAL ★ FLAT LITHO CRAYON ★ COUNTER CHANGE ★ SCRATCH BOARD ★ COQUILLE BOARD ★ TORN PAPER ★ CUT PAPER ★ COLLAGE ★ MONTAGE ★ PHOTOGRAMS ★ SPATTER ★ SPRAYED DESIGNS ★ AIR BRUSH ★ DRY PAINTING ★ STENCIL ★ WOOD BLOCK ★ LINOLEUM BLOCK ★ AMATHOGRAPHY ★ LITHOGRAPHY ★ DRY POINTS ★ MONOTYPES ★ SAND PAPER MONOTYPES ★ AQUATINTS ★ LINOLEUM MONOPRINTS ★ HELIO PRINTS ★ TEMPERA COLOR PROCESS ★ SILK SCREEN ★ BATIK ★ FINGER PAINTING ★ CRAYON PRINTS ★ RHYTHMO-CHROMATIC DESIGN ★ MOTTLED PAPERS ★ CRUMPLED PAPERS ★ CRACKLED PAPERS ★ PUDDLE AND SQUEEGEE METHOD ★ OIL—WATER METHOD ON PAPER.

DESIGN PUBLISHING CO.
243 North High Street Columbus, Ohio